

HEPCO Group Report 2023



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#### Editorial Policy

The HEPCO Group Report is an integrated report structured to systematically present our stakeholders with news about the HEPCO Group's business activities as well as both non-financial and financial information, including from the ESG perspective.

This year's report looks at new initiatives (business activities) to create value through wholesaling electric power, and provides enhanced content about our work to decarbonize thermal power plants and other efforts to go carbon neutral, the merits of nuclear power, and key points of our power source development plan. There is also an explanation of the reassessment of transmission wheeling rates that took into account the revision of electricity charges and introduction of the revenue gap system.

With regard to our ESG initiatives also, we have expanded the scope of disclosure relating to greenhouse gas emissions in relation to our environmental (E) efforts. We have also reassessed our governance (G) in a manner that principally takes into account interests of capital markets, including messages from all five of our outside directors.

It is our hope that this report understandable and easy-to-read. We will continue to strive to sustainably enhance corporate value and provide our stakeholders with the information that they need. HEPCO Group participates in the following initiatives.







 The Task Force on Climate-Related

 Financial Disclosures (TCFD)
 Sustainability Accounting

 Consortium, an organization comprised
 Standards Board (SASB)

 of companies and other organizations
 standards guide information

 endorsing TCFD recommendations. More
 information is available on pp. 53 to 55.

The Carbon Disclosure Project (CDP) is an NGO headquartered in the United Kingdom that is working on environmental issues. More information is available on p. 57.

#### [Publication date] October 2023

- [Period covered] FY2023 (April 1, 2022 to March 31, 2023) (Some information has been included that goes beyond the aforementioned period.)
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#### Notes on Forward-Looking Statements

Future plans, forecasts and other outlooks about the HEPCO Group published in this report are based on currently available information and involve potential risk and uncertainty. Therefore, changes in future economic and market conditions, fluctuations in fuel prices, revisions of relevant laws and regulations, as well as changes in a variety of factors may lead to variations in actual performance, business conditions, and other expectations that differ from those anticipated in this report. HEPCO Group's Business Foundation Hokkaido

The HEPCO Group's business foundation is Hokkaido, the region where we have put down deep roots and developed our businesses. We will grow hand in hand with the development of this vast northern territory, a land of great bounty and, at times, trial.

# Geography

Hokkaido covers 83,421km<sup>2</sup>, accounting for roughly 22% of Japan's land area. It has the largest land area of any prefecture in Japan.



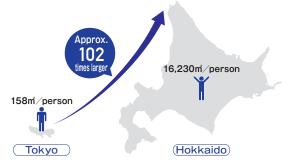
Population:Approx.513million (Approx. 4% of Japan's landmass)

Source: "Municipalities Area Statistics of Japan. 2023" published by the Geospatial Information Authority of Japan under the auspices of the Ministry of Land. Infrastructure, Transport and Tourism (as of April 1)"

Hokkaido has about 4% of Japan's total population, but

per capita land area is roughly 102 times that of Tokyo.

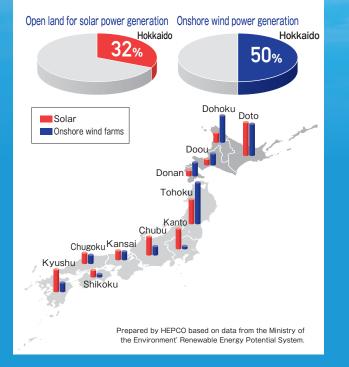
#### Per capita land area



Source: "Population, Population Movements, and Number of Households Derived from the Residential Basic Book (as of January 1, 2023), "Ministry of Internal Affairs and Communications, and the "Municipalities Area Statistics of Japan, 2023" published by the Geospatial Information Authority of Japan, Ministry of Land, Infrastructure, Transport and Tourism (as of April 1)

# Natural Environment

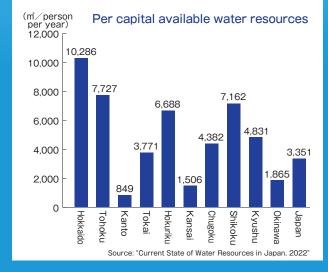
Hokkaido is blessed with abundant natural energy resources. Of the potential for renewable energy development nationwide, Hokkaido has about 32% of the open land for solar power generation and 50% of the potential for onshore wind power generation.



# Water Resources

Although Hokkaido accounts for roughly 22% of Japan's land area, it has less rainfall than the rest of the nation, which leaves it with approximately 13% (56.6 billion  $m^3/$  year) of Japan's available water resources.

Yet, due to the region's low population density compared to other areas, the amount of available water resources per capita in Hokkaido is 10,286m<sup>2</sup>/person per year or almost 3 times the national average of 3,351m<sup>2</sup>/person per year.



#### [HEPCO Group Management Philosophy and Corporate Vision]

The principal mission of the HEPCO Group is to keep the lights on in Hokkaido, support the regional economy as well as our customers' lives even in a business climate of significant change. Based upon our enduring management philosophy, all employees share the vision of the kind of company that the HEPCO Group aims to be and work to sustainably enhance corporate value.

# **HEPCO Group Management Philosophy**

Respect for Contribution to Efficient humanity local communities management

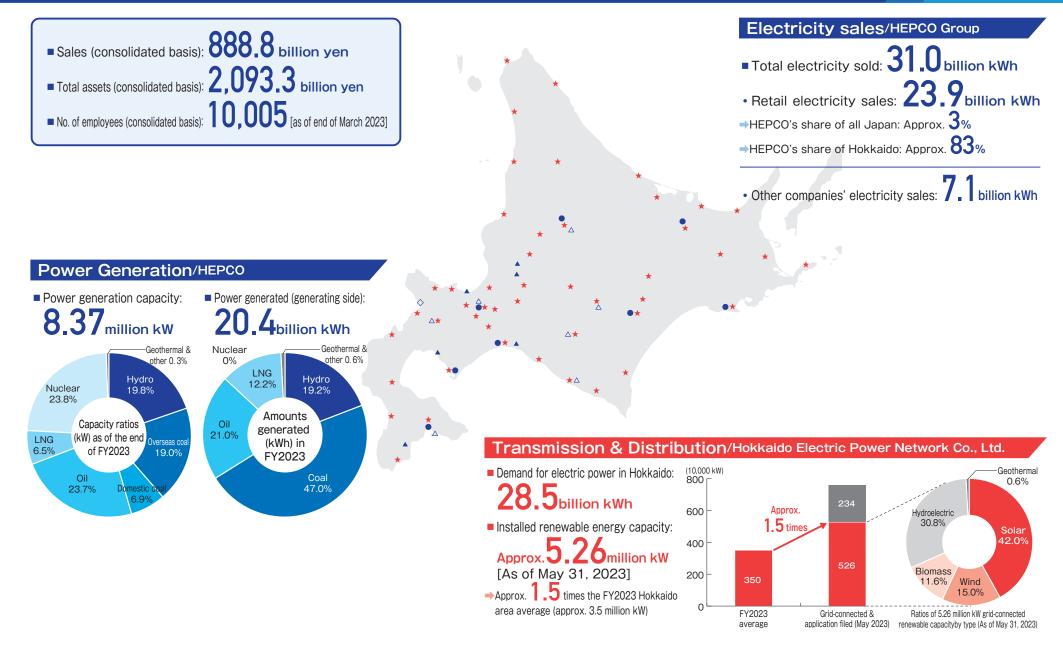
In fulfilment of our management philosophy, we recognize that the HEPCO Group cannot develop unless the local community also enjoys sustained development. We will always live up to our responsibility as a member of society, contribute to its development and the economy, as well as foster culture through the provision of products and services integrating electric power.

# **Corporate Vision**

True to our slogan "light up your future," we support sustainable development of the region through fulfilment of our responsibility to supply energy. Adopting fresh perspectives, we aggressively take on challenges to grow and develop further as a total energy services corporate group. We manage our business operations in a nimble and agile manner, reinforce our business foundation, and meet the expectations of our stakeholders.

CO Group 03 Integrated Repo

# HEPCO Group at a Glance



\* Quantitative data without a specific time indicated is as of the end of FY2023



# **President's Message**

Anticipate change, Innovate, Aim to develop sustainably Into a company that People genuinely need

## On installation as CEO

Greetings, I am Susumu Saito. In June 2023, I started serving as HEPCO Group's Representative Director and Chief Executive Officer. Significant changes are taking place across the environment in which the electricity business operates as we head toward achieving carbon neutrality by 2050. I reflected on what my mission should be as I shoulder that weighty responsibility amid such change. Ever since coming aboard HEPCO as a young engineer, I have gained a variety of experience during stints in the personnel and research departments, but it was the Thermal Power Department where I worked the longest. Thermal power is the exact opposite of a carbon-neutral operation.

I value innovation as a means to make things better and the passion to see tasks through to the end. While working at thermal power plants, we endeavored to switch away from the previous business model of just producing and selling electricity. Among other efforts, we sought to take that a step further and use electricity to generate hydrogen as well as improve system stability while gradually introducing carbon neutral fuels.

I also really enjoy analysis. While serving as director of the Tomato-Atsuma Power Station, my aim was to bring the power station's unit generation cost down so that it was the lowest in Japan. That is why I promoted digital transformation, which included visualizing operational data and switching to information and communication technologies. We also were the first division in HEPCO to introduce the kaizen concept in an effort to increase productivity and streamline facility maintenance.

Now, amid the current transforming renewable energy into a core power source, even the way in which we conduct our business is changing. As this structural change is sought, my mission is to properly understand the general direction of that change within the context of the greater world and to look ahead so that we take the initiative rather than follow everyone else.

## Three elements HEPCO values

Since the HEPCO Group was establishment in 1951, we have strived to furnish a stable supply of electric power in fulfillment of our primary mission, which is to keep the lights on for the people of Hokkaido. I see no change now in that mission of being responsible for maintaining a stable electric power supply in Hokkaido.

That mission and our management philosophy have served as a solid foundation for making management decisions. I have told our employees there are three aspects that our company values.

The first is to be a company that is genuinely needed by our customers and society. I love Hokkaido. No matter where I have been assigned, the warm way that local people call out to us as they say "HEPCO-san"





has been a driving force, encouraging me and boosting my commitment to the work. One of our strengths is that we have sites throughout Hokkaido. We must repay communities the debt of gratitude that we owe them for facilitating these sites. I want us to aim to be a company cherished and truly needed by the people of the community.

The second is to be a robust company capable of stably conducting our business even in an environment where change takes place quickly and it is almost impossible to know what's coming. If we run our business in today's unpredictable business environment only as an extension of how we have previously operated, I sense a crisis coming as our decline will be just a matter of time. We must enrich our creativity, look ahead, and properly confront any change that the environment brings. This is the sort of business foundation that we must bolster.

The third is to be a company capable of pioneering, adopting, and occasionally sharing innovation, as well as making use of changes in the business environment to support our sustainable development. I believe that, if we demonstrate HEPCO's abilities which are technology and know-how developed in the electricity business, then we will be able to produce new value that accords with the needs of the times and bring about significant change in society. At the same time, this will result in sustainable corporate management.

# So that HEPCO offers solutions to the community and contributes to Hokkaido's development

Hokkaido is blessed with some of the most abundant natural energy resources anywhere in Japan. Surrounded by sea, this region encompasses a vast land consecrated with sunshine. Not only is it suitable for onshore and offshore wind farms and solar power generation, but the region also holds the resources necessary for geothermal power generation. In addition, it also has significant potential for woody and livestock biomass power generation to be facilitated through collaboration with local forestry and livestock sectors. While Hokkaido presents outstanding potential for adopting and expanding these sorts of renewable energies, it also has a cold climate with much snowfall in winter and many municipalities spread out across this vast land, so there is also high demand for energy to heat homes and water. It is possible to marshal these factors to increase electrification and expand demand for hydrogen, both of which will also contribute to achieving carbon neutrality.

In addition, local communities are confronting a population decrease, which presents a significant long-term

challenge. We must not allow businesses that put to use Hokkaido's nature in each of the four seasons as well as its attractiveness, such as the tourism, agriculture, forestry, and fisheries industries, to decline and disappear on account of labor shortages or a lack of successors. I feel a deep sense of calling toward this issue, too.

HEPCO is not only an electricity and energy professional, but we have also accumulated know-how and knowledge about maintaining and operating information communication infrastructures as well as transforming businesses through promotion of kaizen and digital transformation. I want HEPCO to leverage these strengths to provide solutions to a range of issues so that we protect communities from depopulation, safeguard industries, and preserve the charm of Hokkaido just as we are striving to do with renewable energies and electrification so that we may contribute to the development of all of Hokkaido.

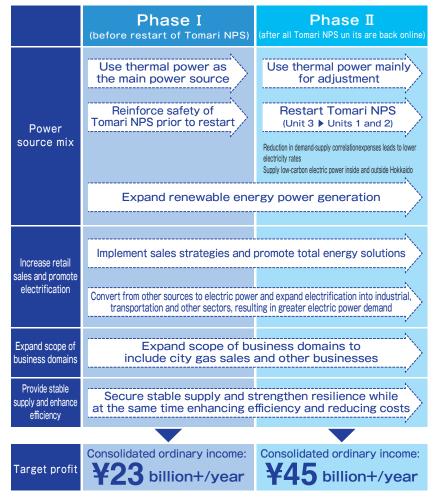
HEPCO will not only continue to operate in the energy field, but also expand the arena in which we do business into primary industries, food, tourism and other non-energy fields where we are able to leverage Hokkaido's strengths as well as contribute to solving social issues to the benefit of the community.

## Progress toward Management Vision 2030

HEPCO Group Management Vision 2030, which summarizes our vision for the year 2030, places a greater emphasis on ESG than ever before and creates new value toward our aim of realizing sustainable growth as a total energy services corporate group and a sustainable society.

Within that vision, we set targets for increasing renewable energy power to at least 300,000 kW as well

Medium- to Long-term Phases and Business Development



as reducing CO2 emissions by more than 50% below the FY2014 level. By FY2023, we have developed 52,000 kW in renewable power sources, which constitutes 17% of the progress required to meet our goal. CO2 emissions were 12.19 million tons, a reduction of 2.22 million tons from the year before, as the amount of thermal power generated fell in addition to other factors. I do not want us to follow in the wake of the ZERO Carbon Hokkaido policy promoted by the Hokkaido government, but rather demonstrate the will to face up to that challenge by taking a stance which drives that effort.

A watershed point in our roadmap to 2030 is achieving the restart of Tomari Nuclear Power Station. Ten years have passed since the review began in the process to restart the station, but we have lived up to neither the expectations of the municipalities around the plant nor those of our other stakeholders as the station has yet to be restarted. We will meticulously and proactively communicate the status of this review as well as our efforts to enhance safety, and continue to make a collective effort to address the review so that the plant can restart soon.

Financially, we anticipate increased cash flow from investments that will be made to restart Tomari Nuclear Power Station. Looking at the current situation, our aim is to first turn a solid profit while steadily restoring eroded equity capital, advancing management with a strong awareness of capital efficiency, and achieving a return that exceeds capital costs over the medium- and long-term so that we will be able to meet the expectations of our shareholders and investors alike. Immediately after taking office, I initiated a review to set targets based on ROIC, ROA, ROE, and other metrics toward practicing management in a manner that is more aware of capital costs and capital profits.



# Bring out the passion of our personnel and transform into an organization encouraging change

With regard to our personnel, the point that I emphasize the most is passion. I believe that companies where employees, including younger employees, are enthusiastic about taking the initiative in their work and managing themselves will be the companies that survive in the future. As a leader, I recognize that, to bring out that passion, it is necessary to present a vision demonstrating that we are ready to transform our company and enthusiastic about taking the initiative and action to do that on our own.

While taking into account good aspects of our current personnel system which gives top priority to fulfilling our social mission of providing a stable supply of electric power, we will clarify our responsibilities and values, and envisage a framework that brings out the passion of our employees. More specifically, we will proceed to reinforce our foundation so that once we have visualized the personnel information, including the knowledge, skills and experience that each and every one of our employees possesses and their personal attributes, we will compensate for areas where we are lacking, and build on our strengths so as to maximize the competence of each and every individual. Then, we will be able to optimize job assignments, appropriately placing the personnel necessary for new business development as well as our existing businesses.

There is the saying: "change begins on the fringes." I believe change will emerge from outside the hierarchal structure of each department in the gaps or zones where these departments intersect. Since prior to assuming the position of president, I have exchanged views on this topic with employees working in a variety of levels and departments throughout all of Hokkaido. I want to engage our employees in a way that enables them to transcend their departments and sections to create a new corporate culture and make HEPCO a company that produces new value.

## To our stakeholders

As a company with deep roots in the community, we will make use of Hokkaido's distinctive features and expand the scope of our business into areas embodying Hokkaido's charm. We will do this not only with electricity and energy but also through leveraging productivity improvements and digital technologies that we have established. By developing our business in such a way that it contributes to the community, we will create a future for Hokkaido in which we are essential for the region and contribute not just electricity, but also facilitate regional revitalization.

One after another, companies are moving into Hokkaido to establish data centers as well as the world's most advanced large semiconductor production plant, a topic talked about throughout Japan. We will restart Tomari Nuclear Power Station and proceed with the installation of renewable energies to be able to properly meet expanding demand with carbon-free power sources. With many relevant businesses also anticipating this, the entire HEPCO Group will make a concerted effort to take advantage of new business opportunities and link those to expanding our business scope.

Transformation will sustain us and provide us with opportunities. I ask for your continued support as we strive in the spirit of "transforming all of Japan from Hokkaido into a competitive country."

# HEPCO Group Value Creation Process

### Management Philosophy

**INPUTS (Management Resources)** 

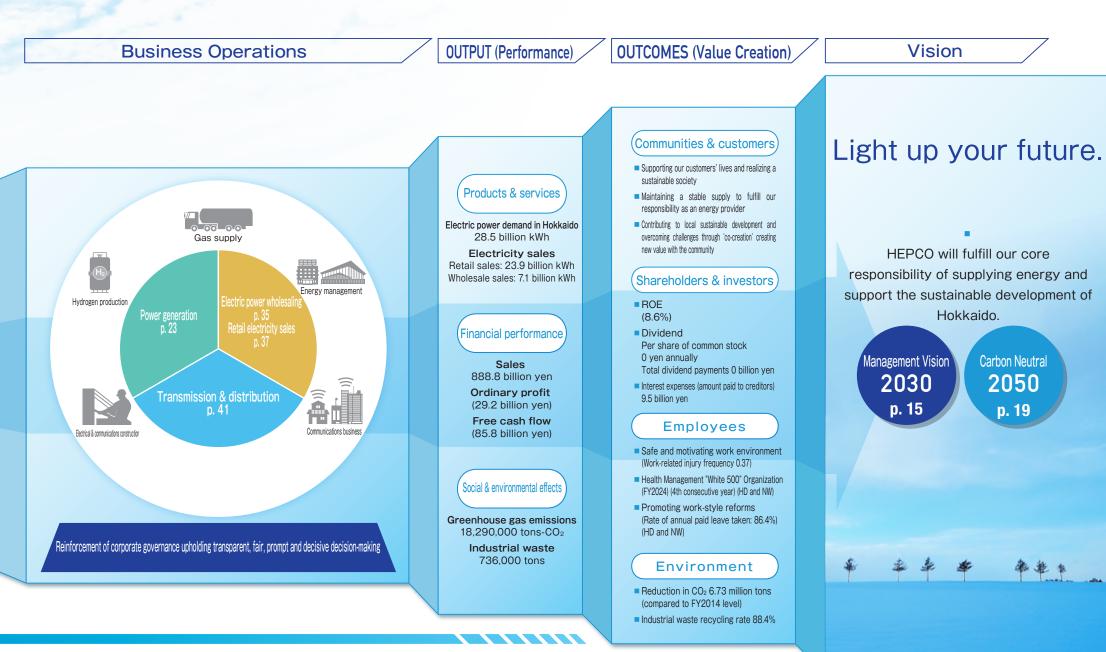
# To sustainably enhance corporate value

Grounded upon our management philosophy mandating 'respect for humanity, contributions to local communities, and efficient management,' the HEPCO Group recognizes that we cannot develop unless the community enjoys sustained development, and we will fulfill steadfast our mission of supporting the economy of Hokkaido and the lives of our customers.

Emphasizing Environmental, Social and Corporate Governance based on the HEPCO management philosophy mandating **ESGG** 'respect for humanity, contributions to local communities, and efficient management'

Manufacturing capital	Power generation facilities: Total output 8,704MW Transmission line length: 8,459km; distribution line length: 68,384km							
Human capital	Employees: 10,005 Engineering personnel: Approx. 70% (HD and NW)							
Intellectual capital	Patents, etc. held: 218 Technology and experience relating to power generation development, maintenance, and operation, as well as power supply Know-how relating to ZEB, ESP, and other energy solutions suited to cold snowy regions							
Social & relational capital	Emergency partnership agreements entered into: 179 comprising all municipalities in Hokkaido (HD and NW) Registered business partners (material procurement): Approx. 2,200 companies (HD and NW)							
Financial capital	Capital 114.2 billion yen   Cash 89.8 billion yen   Interest-bearing debt 1,475.9 billion yen							
Natural capital	Fuel consumption (FY2023)       Rich nature with high renewable energy potential         ■ Coal: 3,600,000 tons       ■ Wind: Good conditions and long coastline         ■ Heavy & light oil: 896,000 kl       ■ Opential: 1,680.3 billion kWh (approx. 59 times Hokkaido demand of 28.5 billion kWh)         ■ LNG: 329,000 tons       ■ Solar: Vast land area blessed with abundant sunlight         ■ Nuclear fuel consumed: 0 kg       Prepared by HEPC0 based on data provided by the Ministry of the Environment's Renewable Energy Potential System							

\* Quantitative data without a specific time indicated is as of the end of FY2023 \* HD: Hokkaido Electric Power NW: Hokkaido Electric Power Network



Quantitative data without a specific time indicated is as of the end of FY2023
 HD: Hokkaido Electric Power NW: Hokkaido Electric Power Network (if not indicated, numbers are consolidated figures)

HEPCO Group Business Operations

Offshore wind farms

LNG-fired thermal power)

Converter statio

Hokkaido-Honshu interconnection lir

The HEPCO Group is not focusing only on our established electric power business, but we are also endeavoring to expand renewable energy power generation by leveraging Hokkaido's unique features, total solution services, and other energy-related businesses. We are always incorporating new perspectives and will offer services that meet the diverse needs of our customers.

Data centers

power generati

Solar PPAs\*2

ESP\*

Hydrogen production

Coal-fired thermal power

★1 ESP: Energy service provider
 ★2 PPA: Power Purchase Agreement\*
 \* Power producers that own power sources contract directly with users that purchase electricity.

Substation

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(Nuclear power)

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# VALUE CREATION STORY

# **HEPCO Group Management Vision 2030**

The business environment in which the HEPCO Group operates is seeing intensifying competition as well as a transforming social structure, driven mainly by decarbonization, population decline, digitalization, and diversification of consumer values. The pace of change affecting our environment is expected to increase further. To ensure we keep up with these changes, we explored our vision for the HEPCO Group in 2030 and compiled that foresight into the HEPCO Group Management Vision 2030.

The restart of Tomari Nuclear Power Station, our main power source, will significantly alter the HEPCO Group's business environment. This step will improve our power source competitiveness and significantly shift emissions toward low carbonization. To this end, we have arranged our business development into the pre-restart Phase I and post-restart Phase II.

## Medium- to Long-term Phases and Business Development

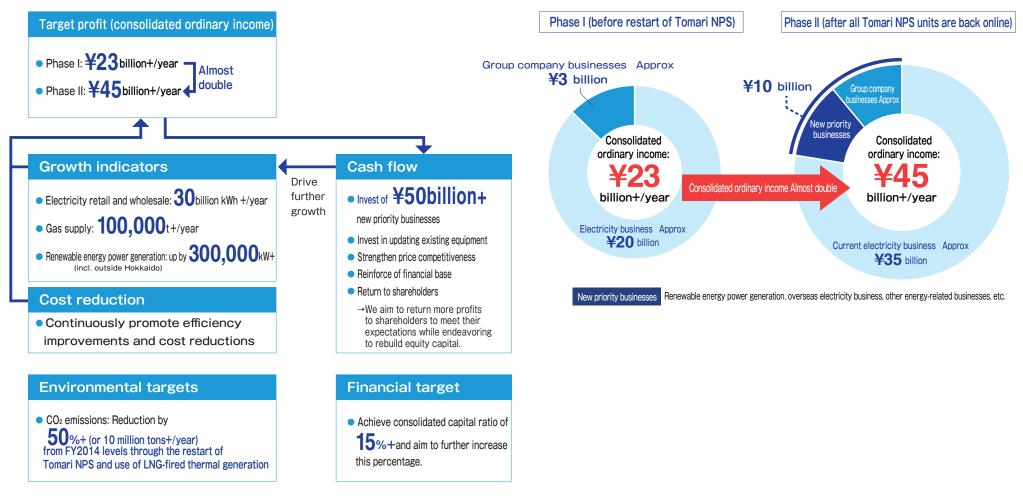
	Phase I (before restart of Tomari NPS)	Phase II (after all Tomari NPS units are back online)	Power sou	urce mix envision	ed by HEPCO Group	Power Generation Division
	Use thermal power as the main power source	Use thermal power mainly for adjustment		Non-fossil power sour	rces: <b>10</b> %	
Power	Reinforce safety of Tomari NPS prior to restart	Restart Tomari NPS (Unit 3 ▶ Units 1 and 2)	FY2014	Hydropower	Thermal power	
source mix	,	Reduction in demand-supply correlation expenses leads to lower electricity rates Supply low-carbon electric power inside and outside Hokkaido	112014	Renewable energy	memai power	(LING/ COAI)
	Expand renewable ene	rgy power generation		Non-fossil power source	es: <b>60</b> %+	
	Implement sales strategies and	promote total energy solutions	FY2031 After restart of			
Increase retail sales and promote electrification			Tomari NPS	Hydropower	Nuclear power	Thermal power (LNG/coal)
	Convert from other sources to electric power and expand electrification into indust	rial, transportation and other sectors, resulting in greater electric power demand		Renewable energy		
Expand scope of business domains	Expand scope of business domains to incl					
Provide stable supply and enhance efficiency	Secure stable supply and strengthen resilience while at					
Target profit	Consolidated ordinary income: ¥23billion+/year	Consolidated ordinary income: ¥45billion+/year				

# **Business Portfolio**

In pursuing the initiatives presented in our vision, we will achieve the management targets indicated below by FY2031.

In addition to our established electricity business, we will expand the scope of our business domain to include other energy-related areas, such as renewable power generation, overseas electricity business, and gas supply, which we define as new priority businesses, in order to drive growth of our entire group.

#### Management targets to be achieved by FY2031



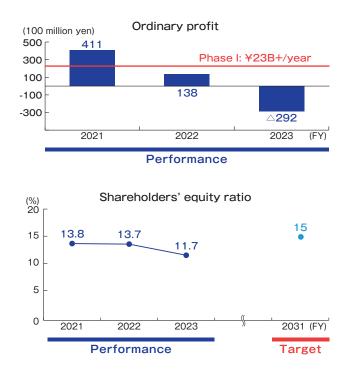
# HEPCO Group Management Vision 2030 Progress

## Target profit (consolidated ordinary income) Phase I: ¥23 billion+/year Phase II: ¥45 billion+/year

Financial target (consolidated capital ratio): 15%+

FY2023 consolidated ordinary income decreased 43.0 billion yen to result in a 29.2 billion yen loss year-on-year due mainly to the increase in power procurement costs as fuel prices and wholesale electricity prices rose.

Consolidated capital ratio was 11.7 at the end of FY2023.



# Cash flow (Investment in new priority businesses) Total investment of ¥50 billion+

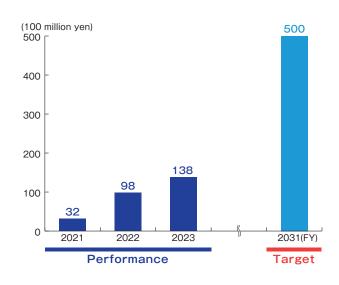
A total of 13.8 billion yen has been invested through FY2023 in new priority businesses, such as renewable energy power generation, overseas electricity business, gas supply business, and other energy-related businesses (Progress rate of 27.6%).

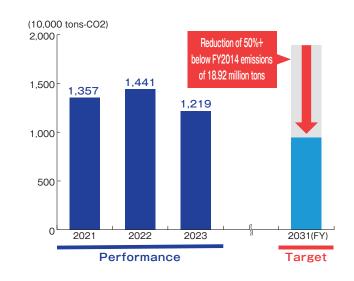
By FY2031, a total of 50 billion yen or more will be invested together with all group companies, generating a profit on the order of 10 billion yen annually.

## Environmental target (Reduction in CO<sub>2</sub> emissions) 50% or greater reduction from FY2014 levels(10 million plus tons/year decrease)

 $\rm CO_2$  emissions in FY2023 decreased by 2.22 million tons year-on-year to 12.19 million tons due to a reduction in thermal power generation output.

Our aim is to restart Tomari Nuclear Power Station soon and proactively expand renewable energy installations so as to reduce  $CO_2$  emissions by 50% or more below the FY2014 level by FY2031.





## **Growth Indicators**

### Retail and wholesale electricity sales\* 30billion kWh+/year

In FY2023, retail and wholesale electricity sales were 26 billion kWh, a decrease of 100 million kWh year-on-year due to a reduction in sales to electricity retailers despite an increase in new customer acquisitions.

In addition to expanding alliances and other efforts to strengthen our sales base, we will restart Tomari Nuclear Power Station as soon as possible and sell inexpensive low-carbon electric power both inside and outside of Hokkaido so that we may achieve our aim of 30 billion kWh or more in sales annually.



### Gas supply business (LNG sales) 100,000 tons+/year

In FY2023, LNG sales through our gas supply business amounted to 10,000 tons for both our city gas and LNG supply businesses (Progress rate of 10%).

The city gas business will continue to aggressively market products mainly by offering packages combining electricity and gas.

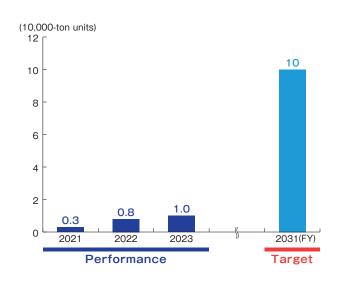
We will strive to expand our LNG supply business through marketing that accurately assesses customers'  $CO_2$  emission reduction needs and proposes solutions combined with other energy services.

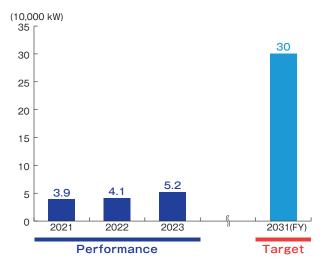
Renewable energy power generation (incl. outside Hokkaido)\* Increase by over 300,000 kW

Both inside and outside of Hokkaido, solar, biomass and other renewable energy power generation has been installed with 52,000 kW of renewable energy power sources developed through FY2023.

Hokkaido enjoys very high renewable energy development potential. We will actively work to build up this capacity with the aim of increasing renewable energy power generation to 300,000 kW or more by FY2031 through the broad installation and expansion of wind, geothermal, solar, biomass, and other forms.

\* Power generation capacity set to be installed since HEPCO management vision announced. (Includes capacity prior to commenced of operations, but not the replacement of existing facilities.)





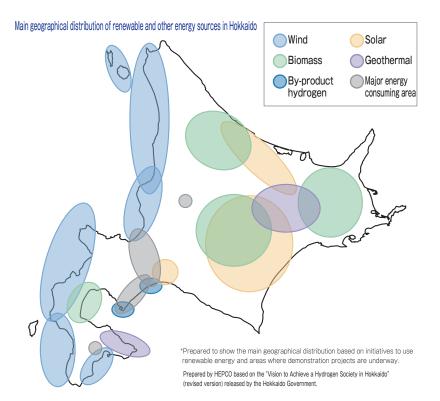
## VALUE CREATION STORY

# Aiming to be Carbon Neutral by 2050

As a company with deep roots in Hokkaido, HEPCO Group supports the Hokkaido economy and our customers' lives, contributing to both the sustainable growth of our businesses and the realization of a sustainable society. While further intensifying the initiatives presented in the HEPCO Group Management Vision 2030, we will contribute to development of the region by doing our utmost to meet the challenge of achieving carbon neutrality for all energy use in Hokkaido by 2050.

## Initiatives Leveraging Hokkaido's Regional Features

In moving forward to achieve carbon neutrality, we believe there are many more ways for us to contribute to decarbonization initiatives in comparison to other regions of Japan and will do so by leveraging Hokkaido's particular characteristics in terms of both supply and demand.



#### Suitable environment for expanding adoption of renewable energy

On the supply side, we will take advantage of Hokkaido's potential, blessed as it is with some of the most abundant natural energy sources anywhere in Japan, to pave the way for increasing installation of renewable energy power generation with offshore and onshore wind power, solar power, woody and livestock biomass power, geothermal, and other sources beyond what has ever been done before.

	Good wind conditions	Surrounded by seas	•	Offshore wind power generation
	Abundant sunlight	Vast land area blessed with abundant sunlight	•	Onshore wind power generation Solar power generation
	Collaboration with local industry	Forestry	♦	Woody biomass power generation
		Livestock		Livestock biomass power generation
	Geothermal r	esources available	•	Geothermal power generation

#### Potential for electrification of energy demand

On the demand side, there is much demand for petroleum-based energy for heating and hot water essential in a cold snowy climate as well as for transportation due to the many municipalities interspersed across this vast and sparsely populated land. The potential energy demand that this region holds may be mobilized for increasing demand for electrification and hydrogen, both of which contribute to carbon neutrality.

Household & business sector (heating and hot water supply)	Energy demand for heating and hot water Electrification (good potential for electrification especially for heating)
Transport sector (passengers and freight)	Energy demand for transport Electrification, hydrogen-based fuels Introduction of electric vehicles (EVs) and fuel cell vehicles (FCVs)
Industrial sector	Convert to electricity as much as possible

# **HEPCO Group Vision**

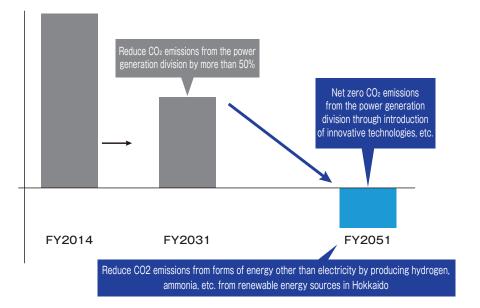
- The HEPCO Group will do its utmost to meet the challenge of achieving carbon neutrality in every energy source in Hokkaido.
- In addition to achieving the HEPCO Group's environmental target for 2030 (reducing CO<sub>2</sub> emissions from our power generation division by more than 50% below
- FY2014 levels), we aim to achieve "zero CO<sub>2</sub> emissions from the power generation division" over the long term.
- Through expansion of electrification and use of green hydrogen, we will seek to achieve carbon neutrality in Hokkaido, including in forms of energy other than electricity.

We will reduce  $CO_2$  emitted from the power generation division by greater than 50% from FY2014 levels by 2030. Our aim over the long-term is to introduce  $CCUS^*$  and other innovative technologies along with the adoption of measures to achieve zero  $CO_2$  emissions from the power generation division.

Furthermore, we will make use of hydrogen and ammonia produced from renewable energy sources in Hokkaido to meet demand for non-electrical power energy to reduce CO<sub>2</sub> and thereby contribute to lowering emissions throughout the region.

\*CCUS (Carbon Capture, Utilization and Storage): Technology to separate and capture CO2 for reuse or underground storage, etc.

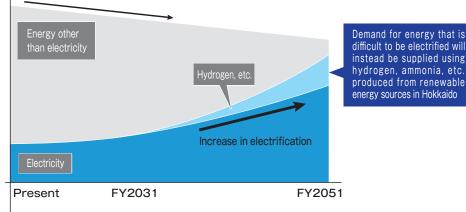
#### Illustration of future CO2 emission reductions



Although Hokkaido's future energy demand is anticipated to decrease due to energy savings, population decline, and other factors, demand for principally petroleum-based energy will be converted to demand for electric power as a result of promoting electrification using CO<sub>2</sub>-free electricity, which will help curb CO<sub>2</sub> emissions and lead to an increase in the amount of electric power supplied.

Moreover, hydrogen and ammonia produced from renewable energies in Hokkaido will provide an alternative supply to meet demand for energy that is difficult to be electrified. This will curb CO<sub>2</sub> emissions and increase HEPCO's contribution in that respect among all energy sources.

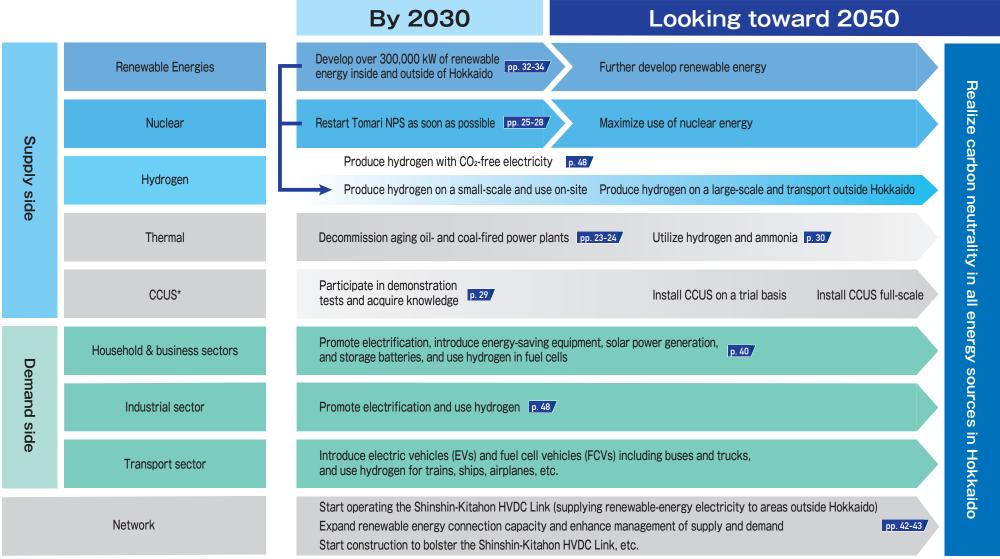
#### Illustration of future energy demand



Effects of energy savings, declining population, and fewer households

# Roadmap to Carbon Neutrality by 2050

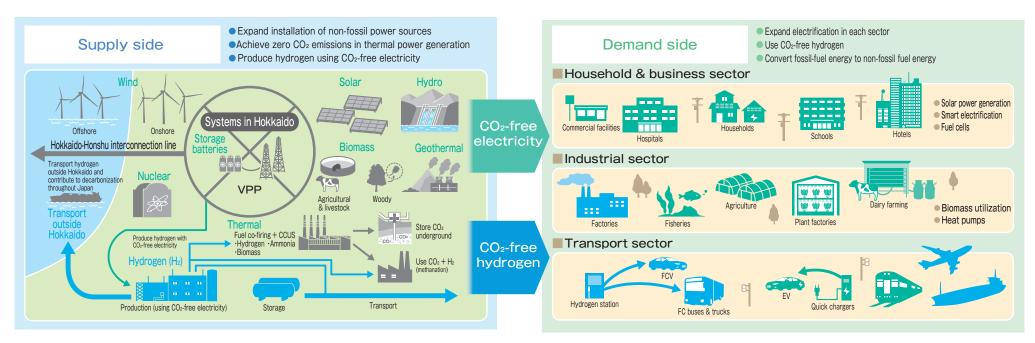
HEPCO Group will make use of innovative technologies and mobilize all available means in addition to measures implemented so far, including expanding the adoption of renewable energy and restarting Tomari Nuclear Power Station.



\*CCUS (Carbon Capture, Utilization and Storage): Technology to separate and capture CO2 for reuse or underground storage, etc.

# Illustration of Carbon Neutrality in Hokkaido

Along with fully promoting the installation of non-fossil fuel power generation on the supply side, we will also strive to contribute to decarbonization with hydrogen production and other initiatives. On the demand side, we will work to expand electrification as well as utilize hydrogen and other CO<sub>2</sub>-free sources in an effort to convert from fossil fuels to non-fossil fuels.



# TOPICS Participation in GX League

Having made the decision to take up the challenge of going carbon neutral and contributing to realizing the Zero Carbon Hokkaido initiative promoted by the government of Hokkaido, HEPCO joined the GX League as its philosophy coincides with our stance.

Based on the idea of seeking to find solutions for concurrently realizing carbon neutrality and economic growth, the GX League is an initiative of a group of companies, which have taken up the challenge to transition as soon as possible to carbon neutrality and lead reform of the entire economic and social system including stakeholders, that engages in discussions with government, academic institutions, financial institutions, and others toward making changes and seeks to create new markets.



We believe that our participation in the GX League will help us accumulate knowledge and know-how for achieving carbon neutrality, contribute to realizing the Zero Carbon Hokkaido initiative, and result in realizing both a sustainable society and maintaining sustainable growth of our business, goals to which the HEPCO Group aspires.

VALUE CREATION INITIATIVES

Nuclear

23.8%

LNG

6.5%

Hydro

19.8%

6.9%

Capacity (kW)

ratios as of

the end of

FY2023

Geothermal & other

0.3%

ESG: OUR VALUE CREATION FOUNDATION

LNG

12.2%

Output

(kWh) in

FY2023

Nuclear

0%

Oil

21.0%

DATA

Hydro

19.2%

Coal

47.0%

Geothermal & other

0.6%

### VALUE CREATION INITIATIVES

# **Power Generation Business**

HEPCO's mission is to provide a stable supply of inexpensive electricity while also considering global environmental conservation (reduction of CO<sub>2</sub> emissions).

To realize this mission, we are aiming to increase the ratio of non-fossil fuel-derived energy on the precondition that Tomari Nuclear Power Station is safely and stably operated. We believe it is important to construct a more balanced power source mix that includes diversifying the types of fuel utilized.

# **Current Power Source Mix**

Formulation of HEPCO's power generation plan takes into account (1) the ability to ensure a stable supply of electric power over the long-term, (2) economic efficiency and price stability over the long-term, and (3) environmental conservation. We have given consideration to combinations of power sources that have a variety of characteristics at base, middle, and peak output, which are adjusted to meet demand gradually changing over time.

HEPCO's current power source mix balances hydropower, coal-fired thermal power, oil-fired thermal power, LNG-fired thermal power, and nuclear power. We will consider the most optimal power source mix in the future as well that is premised on assuring a stable supply, economic efficiency, and global environmental conservation.

# **Decarbonization Initiatives**

Oil

23.7%

HEPCO Group set a target of reducing CO<sub>2</sub> emissions by 50% or more (below FY2014 levels) by FY2031. Currently, thermal power units are the core supporting our supply capacity. We are continuing to do our utmost to restart Tomari Nuclear Power Station, which emits no CO<sub>2</sub> during power generation, and systematically suspending and decommissioning operation of aging thermal power plants while also taking into consideration the Japanese government's policy of phasing out inefficient coal-fired thermal power.

Overseas

coal

19.0%

In addition, toward our long-term goal of achieving carbon neutrality and effectively zero CO<sub>2</sub> emissions by FY2051, we will consider the adoption of power generation methods that utilize hydrogen and ammonia derived from renewable energy sources as well as the introduction of CCUS and other innovative technologies.

Plans for new construction	Power station	Output (10,000 kW)	Unit	Unit output (10,000 kW)	Date operation commenced	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038				
as well as the	Suparawa	25.0	З	12.5	June 1977					▲To be deco	mmissioned in Mai	. 2027													
	Sunagawa	20.0	4	12.5	May 1982					▲To be deco	mmissioned in Mai	. 2027													
suspending and	o Naie∗	35.0	1	17.5	May 1968					▲To be deco	mmissioned in Mai	. 2027													
decommissioning		35.0	2	17.5	February 1970					▲To be deco	mmissioned in Ma	. 2027													
of major HEPCO			1	35.0	October 1980																				
thermal power	Tomato- Atsuma	165.0	2	60.0	October 1985																				
stations	Atsunia		4	70.0	June 2002																				
	Tomakomai	25.0	1	25.0	November 1973																				
	Data 70	Data 70.0	Doto 70.0	Doto 70.0	Date 70.0	Dete 70.0	1	35.0	November 1978	∕∆Su	spended in I	Nov. 2023													
		10.0	2	35.0	March 1980		△To be su	spended in Mar. 3	2024																
	Shiriuchi	70.0	1	35.0	December 1983																				
	Shiriuchi	10.0	2	35.0	September 1998																				
			1	56.94	February 2019																				
	L N G Shinko	170.82	2	56.94									Construct	ion to start in Mar. 2	031	Oper	ration to begin	in Dec. 2034		_					
	G Shinko		3	56.94												Constructio	on to start in Mar. 20	34	Opera	ition to begin	n Dec. 2037				

\*Operation suspended in Mar. 2019

# Power Source Development Plan

#### FY2024 Power Source Development Plan (HEPCO)

	Power generation facility	Output (10,000 kW)	Construction start date <sup>*1</sup>	Date operation started, transferred, suspended, or decommissioned
Under construction	Kyogoku Unit 3 (Pumped-storage hydropower)	20	September 2001	FY2034 or later
Preparation underway for	Ishikariwan Shinko Unit 2 (LNG-fired thermal)	56.94	March 2031	December 2034
construction	Ishikariwan Shinko Unit 3 (LNG-fired thermal)	56.94	March 2034	December 2037
	Ainumanai (Hydropower)	△ 0.2	-	May 2023
Transferred <sup>*2</sup>	Oono (Hydropower)	△ 0.15	_	July 2023
	lsoyagawa Daiichi (Hydropower)	△ 0.24	-	May 2024
	lsoyagawa Daini (Hydropower)	△ 0.125	_	August 2024
	Nanae (Hydropower)	△ 1	-	December 2024
	Date Units 1 & 2 (Oil-fired thermal)	riangle 70 ( $ riangle 35  imes 2$ units)	_	Unit 1: November 2023 (to be suspended) Unit 2: March 2024 (to be suspended)
Suspended or decommissioned POINT 3	Naie Units 1 & 2 (Coal-fired thermal)	riangle35 ( $ riangle17.5  imes 2$ units)	_	March 2027 (to be decommissioned)
	Sunagawa Units 3 & 4 (Coal-fired thermal)	riangle 25 ( $ riangle 12.5  imes 2$ units)	_	March 2027 (to be decommissioned)
	Onbetsu Units 1 & 2 (Oil-fired thermal)	riangle14.8 ( $ riangle7.4$ $ imes$ 2 units)	-	Pending (to be decommissioned)

#### FY2024 Power Source Development Plan (HOKUDEN ECO-ENERGY)

	Power generation facility	Output (10,000 kW)	Construction start date <sup>*1</sup>	Start of operation
Under construction	Akubetsu (Hydropower)	0.702(+0.052)	April 2022	August 2024
(Output increase)	Teshibetsu (Hydropower)	0.243(+0.018)	April 2022	June 2024

\*1 For HEPCO, the start date is the notification date pursuant to Article 48 of the Electricity Business Act. For HOKUDEN ECO- ENERGY Co., Ltd., the start date is the date when construction work commenced on site.

\*2 The hydroelectric power business will be transferred and acquired in keeping with the Hydroelectric Power Station Alliance Business in Southern Hokkaido (October 28, 2021 press release).



# Development of Kyogoku (pure pumped-storage hydroelectric power facility)

With wind, solar, and other renewable energies anticipated to increase in the future as well, pumped-storage hydroelectric power plants, which can be started up and shut down in a short period of time and demonstrate superior capacity to handle load fluctuations, are expected to play a greater role. A decision will be made on when to place Kyogoku Power Station Unit 3 in service while keeping a close watch on future demand and supply conditions. Presently, HEPCO is considering starting operation of Unit 3 in FY2034 or later.

# POINT 2 Development of Ishikariwan Shinko Thermal PowerStation (LNG-fired thermal facility)

After Tomari Nuclear Power Station is restarted, thermal power units will mainly provide balancing capacity, so Ishikariwan Shinko Thermal Power Station Units 2 and 3 will be used to provide that capability. Considering that the facility will be used for long time, it will need to be adapted for carbon neutrality, so the date for its construction will be reviewed while taking into account the status and future outlook of current thermal power generation facilities in addition to the need to consider adoption of new technologies for combustion of hydrogen, ammonia, etc. In the FY2023 Supply Plan, the planned dates for operation commencement were pushed back with the start date for Unit 2 from December 2030 to December 2034 and for Unit 3 from December 2035 to December 2037.

# **POINT 3** Suspension & Decommissioning of Aging Thermal Power Facilities

The capacity factor of the Date Power Station has declined with introduction of Ishikariwan Shinko Thermal Power Station Unit 1 and the installation and expansion of renewable energies. Long-term operation has significantly aged the power generation facility and fuel pipeline, so the station is planned for suspension in FY2024. Facilities at the Naie and Sunagawa power stations have similarly experienced significant aging. Taking that into account together with the policy of phasing out coal-fired thermal power, these two power stations are planned for decommissioning at the end of FY2027.

#### **POINT 4** Reason for Pending Decommissioning of Onbetsu Power Station

The Onbetsu Power Station uses a gas turbine to generate power and operates when the imbalance between supply and demand is significantly stressed. The specific date for decommissioning of this power station has not been determined yet as the timing is being reviewed based on not only the demand and supply outlook, but also the timing of the Tomari Nuclear Power Station restart in addition to aging and condition of thermal power plant facilities. The power station uses pressurized water reactors (PWR). Since Unit 1 went online in 1989, the station

has had a cumulative capacity factor through the end of FY2011 of over 80%. The station has performed

well, operating above the national average (approx. 70%). Tomari Nuclear Power Station has made a solid

Power Generation Business

# **Nuclear Power**

Nuclear power is affected by neither climate nor time intervals as such it provides stability not only in terms of fuel supply, but also long-term costs. On account of such characteristics, it is expected to serve as a stable baseload power source when HEPCO's Tomari Nuclear Power Station is restarted. We will make maximum use of Tomari Nuclear Power Station on the precondition that safety is assured because the power station helps HEPCO to go carbon neutral while also ensuring a stable supply of electric power for Hokkaido.

# **Overview of Tomari Nuclear Power Station**

Tomari Nuclear Power Station is located along the coastline of Tomari village on the west side of Hokkaido. Units 1 through 3 have a combined output of 2.07 million kW. These are pressurized water reactors (PWR).

Location Horikannumura Tomari Village Euru District Hokkaido

Location	Tiorrappullura, Tomari Village, Furu District, Florraido		
	Unit 1	Unit 2	Unit 3
Rated electrical output	579,000kW	579,000kW	91,200kW
Reactor type	Light-water moderated, light water cooled, and pressurized water		
Start date	August 1984	August 1984	November 2003
Operation start date	June 1989	April 1991	December 2009

Shakotan Peninsula

Kamoenai Village

Iwanai Town

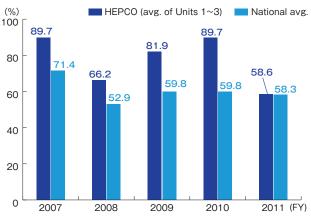
omari Nuclear Power Station Tomari Village

Kyowa Town

#### National capacity factor average compared to HEPCO's Tomari NPS capacity factor

contribution enabling HEPCO to supply inexpensive and stable electric power.

Basic Data about Tomari Nuclear Power Station





DATA

\*Prepared by HEPCO based on the Japan Atomic Industrial Forum's "Operating Performance of Japan's Nuclear Power Stations."

## Merits of Nuclear Power Generation

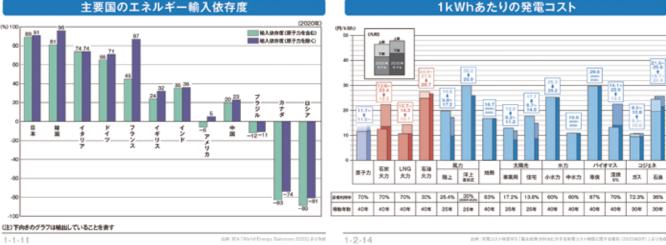
For Japan as a country lacking in natural resources, the role of nuclear power, which offers an excellent 3E balance (assurance of a stable energy supply, economic efficiency, and environmental sustainability), is very significant, and this importance will not diminish in the future, either. HEPCO will restart Tomari NPS soon on the precondition that safety is assured and effectively utilize the station to realize carbon neutrality.

#### Assurance of Stable Energy Supply

With scarce resources, Japan is dependent upon other countries for most of its fossil fuels. Japan's energy self-sufficiency rate was close to 20% prior to the Great East Japan Earthquake in 2011. The shutdown of nuclear power, which is regarded as a quasi-domestic energy, has spurred an expansion of renewable energies over the past few years, but Japan's energy self-sufficiency rate is still only around 10%, a low level in comparison to other countries.

#### **Economic Efficiency**

Figures showing the cost of generating electricity by power source have been released for the year 2030. Calculation of the cost of nuclear power generation is not only directly related to generation, but also incorporates the cost of reactor decommissioning, nuclear fuel cycle, accident response (incl. damage compensation and decontamination), as well as other factors. Even in the context of such a comparison, the cost of nuclear power generation measures up favorably compared to other power generation methods.



#### 展示力・エネルギー回答素

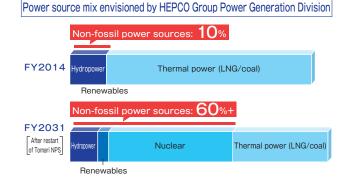
Sources: "Graphical Flip-chart of Nuclear & Energy Related Topics," Japan Atomic Energy Relations Organization

Sources: "Graphical Flip-chart of Nuclear & Energy Related Topics," Japan Atomic Energy Relations Organization

#### **Environmental Sustainability**

Japan has declared that it will reduce greenhouse gas emissions by 46% in comparison to the FY2014 level by FY 2031 and reach zero overall by the year 2050. Nuclear power generation and other carbonfree power sources will play a major role in achieving carbon neutrality.

After all units of Tomari Nuclear Power Station return to service, the HEPCO Group estimates that the ratio of non-fossil power sources to HEPCO Group's total power generation will rise from 10% in FY2014 to more than 60%, halving CO2 emissions compared to the level in FY2014 (reduction of over 10 million tons/year).



#### Tomari Nuclear Power Station's Impact on Reducing CO<sub>2</sub>

Although the effect may vary depending on the underlying conditions, when provisional calculations were made based on certain conditions\*, the CO<sub>2</sub> emissions reduction effect from the restart of all Tomari Nuclear Power Station units would be on the order of 6 million tons of CO<sub>2</sub>



- CO2 emission factor: 0.533kg-CO2/kWh (FY2O23 average emissions factor for all HEPCO power sources)
  - Nuclear power station capacity factor: 70%
    Nuclear power station auxiliary power ratio: 4% (Source: Report
  - published by the Central Research Institute of Electric Power Industry) • Rate of transmission/distribution loss: Assumed to be 5%

## Tomari Nuclear Power Station Today

Tomari Nuclear Power Station Units 1 through 3 are currently undergoing review by the Nuclear Regulation Authority to determine their compliance with the new regulatory requirements with the aim of restarting the plant.

We will take the lessons learned and experiences endured during the accident at Fukushima Daiichi Nuclear Power Station, Hokkaido Eastern Iburi Earthquake and other natural disasters, apply the advice and opinions of research institutes, third-party organizations, community residents and our customers, as well as collect, assess and utilize risk information to continue to rigorously evaluate and improve HEPCO's own activities in our tireless endeavor not only to sincerely comply with the review and enhance safety, but also to achieve world-class excellence in safety in our aim to make Tomari a power station that people can trust.

\*1 Assessment of effectiveness of basic design policy and measures as relates to severe accident or similar event response

\*2 Description of detailed design of facilities and other equipment necessary for measures for severe accident or similar event response that are based upon permission to amend the reactor license (ex, pump specifications and number of units)

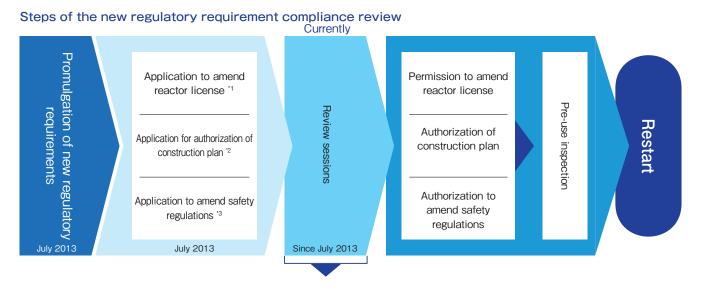
\*3 Procedures for operating and managing facilities as well as a system of measures for severe accident or similar event response

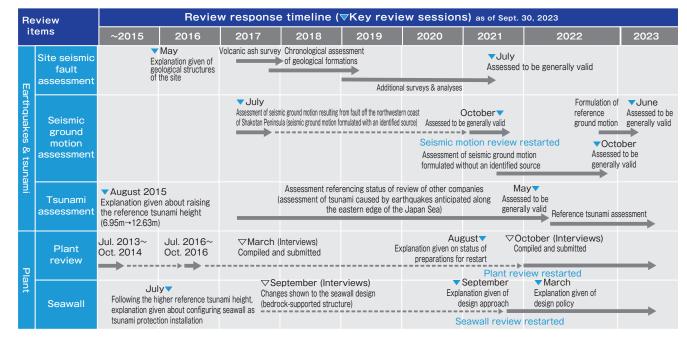
#### Principal review items and HEPCO's responses

In July 2013, HEPCO filed a package application with the Nuclear Regulatory Authority, requesting permission to amend the reactor licenses, authorization of construction plans, and amendment of safety regulations for Units 1, 2 and 3 at Tomari Nuclear Power Station in order to undergo the review examining compliance with new regulatory requirements.

Subsequently, priority was awarded to Unit 3 and HEPCO has cooperated with the review. In the review sessions held so far, we have provided explanations about assessments of faults within the site, assessments of seismic ground motion and tsunami, design policy for seawalls, and other aspects.

We will cooperate with the review examining earthquakes, tsunami, and other such natural events as well as proceed to formulate reference tsunami with the aim of restarting Tomari Nuclear Power Station as soon as possible on the precondition that safety is assured. Along with the formulated reference ground motion and reference tsunami to be formulated for the plant facilities, we will be conducting an assessment of the effects of such events.





#### HEPCO Group 27 Integrated Report

## Safety Improvements

Functions fundamental for ensuring the safety of a nuclear power plant are to "shut down" the reactors, "cool" the fuel, and "contain" radioactive materials. When the accident occurred at the Fukushima Daiichi Nuclear Power Station in March 2011, the reactors were successfully shut down, but inundation resulting from the tsunami made it impossible to cool the fuel, and, ultimately, the function for containing radioactive materials was lost.

HEPCO has promoted a variety of safety measures to enhance the safety of Tomari Nuclear Power Station. Even so, we are continuously working to further reduce the risk of a severe accident, not just limit our work to the safety measures implemented so far. This is based on our strong resolve never to allow an accident like the one at Fukushima Daiichi Nuclear Power Station to happen again.

# Deployment of 2,120m fire belt — A fire belt is maintained so that, if a forest fire

breaks out around the power station, it will not spread to areas inside the power station premises.

# Deployment of **14** emergency power – supply units outdoors

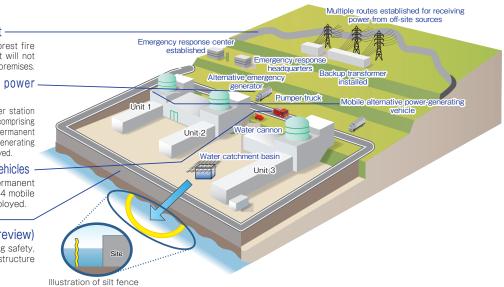
In preparation for a situation where power station emergency power is lost, a total of 14 units comprising both alternative emergency generators (permanent equipment) and mobile alternative power-generating vehicles (mobile equipment) have been deployed.

#### Deployment of **14** water pumping vehicles

In preparation for a situation where permanent pumps supplying water are unusable, 14 mobile water pumping vehicles have been deployed.

# Installation of seawall (Design policy currently under review)

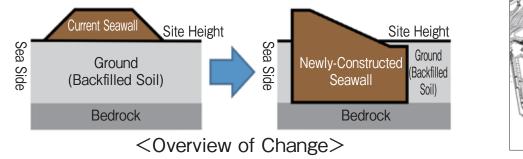
From the standpoint of further enhancing safety, a new seawall will be installed with a structure directly mounted onto hard bedrock.

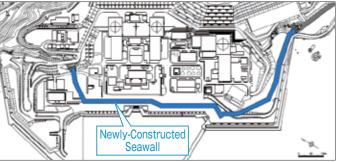


#### **Construction of Newly-Designed Seawall**

From the standpoint of further enhancing safety, a decision has been made to modify the seawall at Tomari Nuclear Power Station to one that is a rock-anchored and -supported structure (i.e. supported by solid bedrock). The current seawall has been almost entirely removed and countermeasures implemented to ensure the safety of spent fuel under current circumstances. However, from the standpoint of enhancing safety, we would like to install the newly-designed seawall as soon as possible.

We are presently proceeding with preparations for constructing the newly-designed seawall as well as temporary work. When construction on the main part of the newly-designed seawall will begin depends upon the progress of future review sessions.





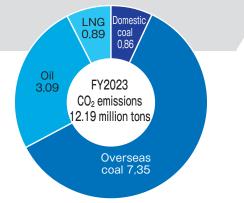
VALUE CREATION INITIATIVES Power Generation

# **Thermal Power**

In addition to its core role as a key source providing electric power, thermal power provides outstanding balancing capability. So, it also plays an important role in maintaining the balance between demand and supply. In the future as renewable energy power sources increase with society moving toward carbon neutrality, the need for thermal power generation to serve as a balancing solution will not change because a stable supply of electric power must be assured. HEPCO is taking up the challenge of working to decarbonize thermal power as we aim to reconcile both carbon neutrality and stable supply.

As we proceed to suspend and decommission aging thermal power plants, we aim to introduce CCUS, ammonia mixed combustion, and other low carbon technologies at Tomato-Atsuma Power Station, which will serve as one of HEPCO's principal sources of power until around the year 2030.

Moreover, toward the goal of realizing carbon neutrality by 2050, we will endeavor to decarbonize thermal power generation by endeavoring to expand application of ammonia and hydrogen mixed and single-fuel combustion technologies as well as scaling up our CCUS operations.



# FY2023 CO<sub>2</sub> emissions (12.19 million tons) by fuel type from HEPCO Group power divisions

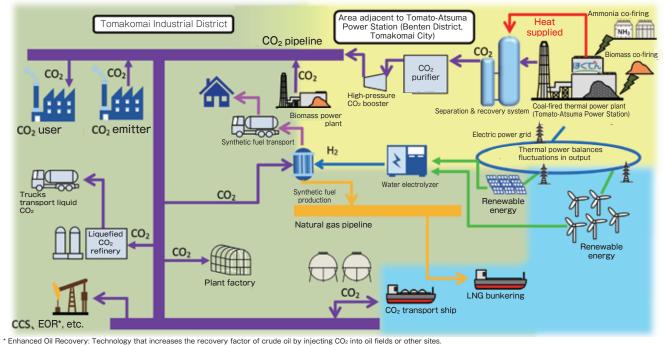
# Initiatives Aimed at Introducing CCUS

In recent years, carbon dioxide capture, utilization and storage or CCUS has garnered attention as a technology for decarbonizing thermal power generation. This technology takes  $CO_2$  emitted from power stations, plants, and other facilities, and separates it from exhaust gas and other emissions. It is then captured and the  $CO_2$  either utilized or stored deep underground.

In anticipation of setting up a CCUS operation in the Tomakomai area where the Tomato-Atsuma Power Station is located, HEPCO started conducting surveys and reviews in January 2023 with Idemitsu Kosan Co., Ltd. and Japan Petroleum Exploration Co., Ltd. These operations have mainly taken the form of looking at points where  $CO_2$  is emitted along with capture and transport pipeline technologies in addition to surveying areas appropriate for use as storage points. The goal is to launch a CCUS hub and cluster network\*, which will connect multiple points in the Tomakomai area, by the FY2031.

 $^{\ast}$  CCUS hub and cluster network: CCUS operation that not only captures and stores CO\_2 from one emissions source, but also covers many emission sources in an area to efficiently utilize the CO\_2, thereby effectively reducing emissions from a region to an even greater extent.

#### Illustration of CCUS network in Tomakomai area



## Moving toward introducing ammonia and hydrogen in thermal power generation

	Characteristics	Challenges
Ammonia	<ul> <li>Zero CO<sub>2</sub> emissions during combustion</li> <li>Mixed combustion is anticipated at coal-fired thermal power plants</li> </ul>	<ul> <li>Mixed and single-fuel combustion technologies need to be established</li> <li>Existing coal-fired thermal power generation facilities need to be studied with the goal of utilizing ammonia in mixed combustion at such power plants</li> <li>Current market for fertilizer and chemical use is small, so construction of a large supply chain is necessary when utilizing ammonia in a large quantity as fuel for generating power</li> </ul>
Hydrogen	<ul> <li>Zero CO<sub>2</sub> emissions during combustion</li> <li>Mixed combustion is anticipated at LNG-fired thermal power plants</li> </ul>	<ul> <li>Mixed and single-fuel combustion technologies need to be established</li> <li>Existing LNG-fired thermal power generation facilities need to be studied with the goal of utilizing hydrogen in mixed combustion at such power plants</li> <li>Many technical challenges need to be addressed for transport and storage of hydrogen when it is utilized in large quantities as fuel for power generation</li> </ul>

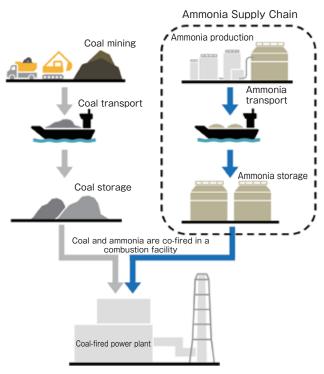
# Initiatives for introducing mixed combustion using ammonia or hydrogen

Mixed combustion using ammonia in coal-fired thermal power plants will be able to make use of existing power generation facilities, so it is regarded as a promising decarbonization technology. We are reviewing this technology with the aim of introducing it at Tomato-Atsuma Power Station by 2030.

In addition, hydrogen-mixed combustion is also regarded as a promising option for achieving carbon neutrality at LNG-fired thermal power plants, and we are studying facilities with the goal of adopting this technology.

Furthermore, with the aim of constructing stable and economically-efficient ammonia and hydrogen supply chains to provide fuel for generating power, HEPCO has been reviewing possibilities for collaboration with other utilities operating large thermal power plants in Japan as well as promoting additional initiatives to decarbonize thermal power generation.

#### Illustration of ammonia-mixed combustion at Tomato-Atsuma Power Station



# TOPICS

#### Efforts for stably procuring fuel and reducing costs

The surge in fuel prices has significantly increased uncertainty in the fuel procurement environment.

Amid such conditions, HEPCO has sought to optimize fuel procurement based on the following three perspectives.

- Safety: Stable procurement over the short-term as well as the medium- and long-terms
- Economic-efficiency: Reduction in procurement prices
- Flexibility: Ensuring flexibility in responding to changes

#### Efforts for procuring overseas coal

- Reduce procurement prices by diversifying contracts, pricing schemes, and employing other mechanisms (economic-efficiency and stability)
- Utilize flexible spot market procurement that takes advantage of falling market conditions and makes use of coal yard capacity (economic-efficiency and flexibility)
- In addition to efficient transport using large bulk carriers, provide for highly flexible transport by combining transport contracts based on the number of voyages (economic-efficiency and flexibility)

#### Efforts for procuring LNG

- Secure options for increasing and decreasing long-term contracts that provide stable prices compared to spot market purchases (stability and economic-efficiency)
- Flexible spot market procurement that takes advantage of falling market conditions and makes use of LNG tank capacity (economic-efficiency and flexibility)
- In addition to contracts for procurement from specific supply sources, ensure procurement stability with combinations of procurement contracts from sellers maintaining multiple supply sources (portfolio contracts) (stability)

VALUE CREATION INITIATIVES Power Generation

# **Renewable Energies**

# Hydropower

Hydroelectric power is a clean energy that does not emit CO<sub>2</sub> during the generation process. It is a renewable energy that allows stable power generation over the long-term. Of the different types of hydroelectric power, the ordinary (run-of-river) type that controls water flow is expected to serve as a baseload power source with the pumped storage-type fulfilling the role as a balancing solution.

While there are some aging power stations, these types of hydroelectric power generation will contribute to achieving carbon neutrality through their use over the long-term as work is performed to replace aging facilities, update components, and perform other such tasks.

### Aging Management: Replacement and Component Updating

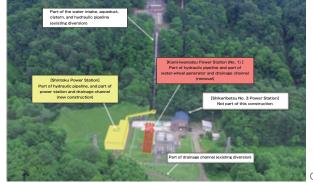
Hydropower generation is a clean renewable energy that does not emit CO<sub>2</sub>. It is also essential for achieving carbon neutrality. HEPCO has strived to stably operate power plants while updating components and performing repairs at the appropriate times. We have also been introducing new technologies and effectively utilizing untapped energies as part of our efforts to increase output and generating capacity.

When aging facilities have deteriorated significantly, extensive renovation work (replacement) may also be necessary. Such facilities are addressed consecutively as the FIT scheme and other frameworks employed. HEPCO is working to maintain and ensure stable power sources for the future.

#### [Shintoku Power Station]

The former Kamiiwamatsu Power Station Unit 1 was replaced with Shintoku Power Station, which began operating commercially on June 1, 2022.

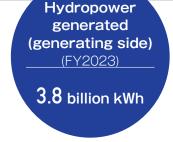
Max. output: Increased from 20,000kW to 23,100kW (annual power generated: +12,600MWh)





Retrofitting the generator at Shintoku Power Station

Overview of Shintoku Power Station

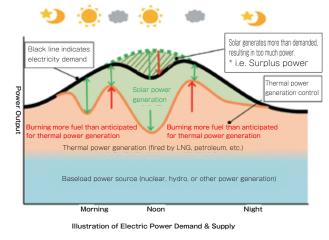


## Pumped-storage power stations contributing to greater adoption of renewable energies

In recent years, as solar power and other renewable energies have been increasingly adopted, there have been more and more occasions when surplus power is generated during daytime. Pumped-storage power stations, which can be started up and shut down in a short time and offer superior capability to handle load fluctuations, serve as balancing solutions so that maximum use of renewable energies may be achieved. HEPCO has three pumped-storage power stations capable of providing a

total of 800,000kW.

Of these, the Kyogoku Power Station (output: 400.000kW) has adopted a state-of-the-art variablespeed pumped-storage power generation system. It has the capability to respond quickly, using both power generation and pumped storage, to fluctuations in solar and wind power generation output. This is an essential power station that is part of our efforts to adopt renewable energies in Hokkaido.

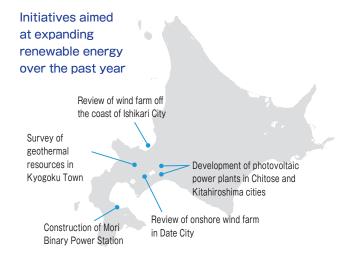


\* Partially revised source, "Toward Adoption of Large Amounts of Renewables: Challenges and Measures to Address Grid Constraints" published by the Agency for Natural Resources and Energy.

# Striving to Expand Renewable Energies

HEPCO will achieve the target set out in the HEPCO Group Management Vision 2030, which we announced in April 2020, of increasing renewable energy power generation (including outside Hokkaido) to a minimum of 300,000kW by FY2031, after which we will work to further expand that capacity.

After we announced our vision, total renewable energy sources set for installation amount to approximately 52,000kW (as of the end of FY2023). We will proceed to consider expanding capacity so that we do not miss any business opportunities, having taken into account such efforts from the standpoints of decarbonizing power sources and effectively utilizing regional resources.



HEPCO maintained capacity by power source

			Unit (10,000 kW)
	FY2021	FY2022	FY2023
Wind	-	-	-
Geothermal	-	0.1	-
Solar	3.5 (overseas) 0.4	0.1	0.1
Biomass	0	_	1.0
FY total	3.9	0.2	1.1
Cumulative total	3.9	4.1	5.2

\* HEPCO-maintained capacity of each power source set for installation after HEPCO Management Vision announced (counting capacity prior to commencement of operation, but not including replacement of existing facilities)

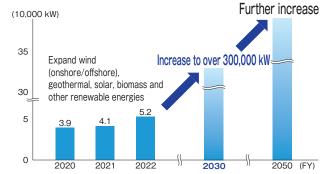
## Renewable energy potential in Hokkaido

Hokkaido accounts for approximately 55% of Japan's potential onshore wind power, roughly 30% of its offshore wind power, and about 15% of the nation's geothermal power. This region is blessed with abundant natural energy resources, which the HEPCO Group is also actively working to survey and develop.

#### Potential wind and geothermal power in Hokkaido

	Nationwide (10,000 kW) (①)	Hokkaido (10,000 kW) (②)	Ratio (%) (②/①×100)
Onshore wind farms	28,456	15,622	54.9
Offshore wind farms	112,023	31,944	28.5
Geothermal	1,037.5	147.5	14.2

Excerpt and partial revision of "2019 Report Commissioned on the Consolidation and Public Disclosure of Basic Information on Zoning as Concerns Renewable Energies" published by the Ministry of the Environment



\* HEPCO-maintained capacity of each power source set for installation after HEPCO Management Vision announced (counting capacity prior to commencement of operation, but not including replacement of existing facilities)

### Onshore wind power

HEPCO will leverage the potential of Hokkaido with its vast land and good wind conditions, and actively develop this resource. Currently, we are surveying and reviewing many aspects, including wind conditions, of promising candidate sites in Hokkaido.



#### Wind measurement tower

#### Initiatives in Date City

HEPCO entered into an agreement with ORIX Corporation to engage in joint development, under which we are currently conducting a joint review with the goal of realizing an onshore wind farm project in Date City, Hokkaido.

#### **Project overview**

Name	(Tentative) Seiryo Wind Farm	
Project site	Otaki, Date City, Hokkaido	
Output	Max. 189,000kW (Single-unit output: 4,200kW $\times$ max. of 45 units)	

## **Offshore Wind Power**

Since the Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities ("Renewable Energy Sea Area Utilization Act") took effect, it has been anticipated that offshore wind power will become more prevalent and increase. HEPCO is actively pursuing initiatives so that we do not miss opportunities in this business.

Under the Renewable Energy Sea Area Utilization Act, five areas of Hokkaido were partitioned into "promising areas" on May 12, 2023: the areas off the coast of Ishikari City, Gan-wu and Minami-Shiribeshi districts, Shimamaki, Hiyama, and Matsumae. Of these five, the three areas of the Gan-wu and Minami-Shiribeshi districts, Shimamaki, and Hiyama were selected as areas for survey using the Central Method. The Japan Organization for Metals and Energy Security is conducting the surveys.

With meticulous attention paid to trends toward designating areas for promotion pursuant to the Renewable Energy Sea Area Utilization Act as well as the results of Central Method surveys in addition to other factors, HEPCO is reviewing project feasibility with eye toward participating in projects while also gaining the understand of people in the community.

\* Central Method: Method by which surveys are conducted quicker and more efficiently with the government and local municipalities participating from the initial stage of project formulation in the aim of accelerating formation of future aspects of projects for offshore wind power generation.

# [REF] Promising areas under the Renewable Energy Sea Area Utilization Act (announced by the Ministry of Economy, Trade and Industry on May 12, 2023

Off the coast of Ishikari City
Off the coast of Gan-wu and Minami-Shiribeshi districts\*
Off the coast of Shimamaki\*
Off the coast of Hiyama\*
Off the coast of Matsumae
\* Area to be surveyed using Central Method

#### Initiatives in Ishikari City

HEPCO has entered into a partnership agreement with Green Power Investment Corporation (GPI), and we are jointly reviewing wind power off the coast of Ishikari City in Hokkaido.

Offshore work on the 100,000kW seabed-fixed offshore wind farm, which is currently under construction in the port area, began in May 2022 with operation scheduled to commence in December 2023.



 Wind farm output
 Per-turbine output
 No. of turbines
 Operation start

 Approx. 100,000kW
 8,000kW
 14 units
 December 2023



## Solar Power

HEPCO Group has participated and operated projects involving photovoltaic power plants overseas and throughout Hokkaido.

#### Initiatives relating to projects developing photovoltaic power plants with the aim of off-site PPA

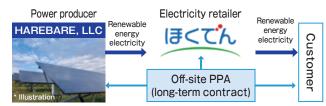
In July 2023, HAREBARE, LLC., a power generation company that is a joint venture between HEPCO and ARC Co., Ltd., was established and began developing photovoltaic power generation.

The joint venture plans to construct a series of photovoltaic power plants totaling approximately 16,000kW at 10 locations in Chitose and Kitahiroshima cities by the end of FY2025, and then expand the development sites.

The generated electricity will be delivered to corporate customers via a mechanism known as an Off-site PPA (Power Purchase Agreement)\*.

\* Electric power contract through which a power producer sets up a renewable energy power generation facility outside the site of an electric power user's location and an electricity retailer delivers the electric power generated at the renewable energy power generation facility over the electricity grid.

#### **Project Scheme**



Mounted wind turbine (July 2023; photo courtesy of GPI Corporation)

### Geothermal

#### Geothermal Binary-Cycle Power Generation Project Initiative

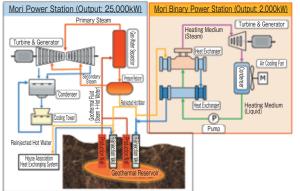
Together with JFE Engineering Corporation and Tokyo Century Corporation, HEPCO established Mori Binary Power LLC to implement a geothermal binary-cycle power generation project in Mori town. Construction is gradually moving forward on the project with the aim of commencing commercial operation in November 2023. (Output: 2,000kW)

The Mori Binary Power Station will generate power by effectively utilizing untapped heat energy from reinjected water at HEPCO's Mori Geothermal Power Station.

Leveraging the expertise which HEPCO has developed in our power generation business, we will assume responsibility for work management during construction as well as power plant operation and maintenance after commercial operation begins.

Following on from the Mori Geothermal Power Station, we are seeking to develop new geothermal power generation projects, which are anticipated to provide a stable supply of electric power. So, we are surveying promising areas in Hokkaido for development.





Method of generating power using hot water to heat up a medium with a boiling point lower than water and then utilizing the steam generated to turn a turbine.

#### Initiatives in Kyogoku Town

Together with Obayashi Corporation and Idemitsu Kosan Co., Ltd., HEPCO is making use of assistance from the Japan Organization for Metals and Energy Security to conduct surveys in order to ascertain geothermal resources in the north of Kyogoku City.

We joined the surveying in FY2023, and have been conducting deep boring surveys (down to depths of 2,000m) in FY2024.



Geothermal resources survey in north Kyogoku

# TOPICS

#### Issuance of HEPCO Green Bonds

Since FY2022, HEPCO has issued Hokkaido Electric Power Green Bonds, which are corporate bonds limiting the use of funds procured to development and other operations relating to renewable energy.

These green bond issues diversify and stabilize financing and help us promote our efforts to achieve carbon neutrality.

More information including the framework and external assessments is provided on HEPCO's website.



https://www.hepco.co.jp/corporate/ir/corporate\_bonds/index.html

#### **Overview of HEPCO Green Bonds**

	1st issue	2nd issue
Issue date	December 2, 2021	July 14, 2022
Issue amount	5 billion yen	5 billion yen
Maturity	10 years	10 years
Interest rate	0.330%	0.789%
Rating	A (R&I)	A (R&I)
Use of procured funds	Funds allocated for refinancing and new investment in development, construction, operation, and repair of hydro and solar power renewable energies	Funds allocated for refinancing and new investment in development, construction, operation, and repair of hydro power and geothermal renewable energies

#### Allocation status and environmental impact of funds procured with the 2nd Hokkaido Electric Power Green Bond Issue (as of March 31, 2023)

	Amount procured		¥5 billion yen
Amount			¥5 billion yen
	allocated	Of that, amount financed	¥1.31 billion yen
	Unallocated balance		_
Projects	Facility	Hydroelectric	1,723MW
ects :	capacity	Geothermal	25MW
allocated to	Annual CO <sub>2</sub> emissions	Hydroelectric	2,049,895 t-CO <sub>2</sub> /y
ed to	reduction (FY2023)	Geothermal	59,013 t-CO <sub>2</sub> /y

\* The status of the allocation of funds from the first bond issue and their environment impact are published on the HEPCO website.

- \* Facility capacity is indicated for each type of renewable energy that HEPCO Group generates.
- \* The amount of CO<sub>2</sub> emissions reduced annually is calculated using the annual amount of power generated for each type of renewable energy multiplied by the CO<sub>2</sub> emission factor.

### VALUE CREATION INITIATIVES

# **Electric Power Wholesaling**

Amid the drastic changes taking place in the electricity business brought about in part by a series of electric power system reforms including full liberalization of the electricity business, HEPCO aims to maximize profit through the active use of wholesale transactions combining spot trading and derivatives as well as optimization of demand-supply management. As renewable energies are adopted and expanded, new markets are created, and other events change the business environment, we are working to further reduce demand and supply-related expenditures. It is also necessary to actively leverage the spot market, futures market, negotiated transactions, and a variety of other avenues to increase revenue, so we established the Optimization & Trading Department and built a system that strengthens our market analysis capabilities, closely coordinates information, and allows for quick decision-making.

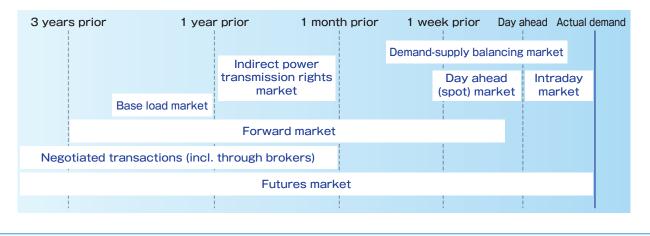
In addition, we have aggressively worked to hire personnel with expertise and intimate knowledge of financial transactions and trading. Maximizing the specialized knowledge and know-how that these professionals possess will contribute to enhancing corporate value.

### Timing of market and negotiated transactions

The diagram below shows the timing when market and negotiated transactions are executed.

The formation of new markets and revitalization of existing markets have created many opportunities for transactions ranging from short-term to long-term.

To effectively utilize our supply capacity, we are seeking to increase revenue by prioritizing profitable market and negotiated transactions.







Office at the Demand-Supply Management Center

# Key Initiatives

Intensified competition in the retail electricity market has made it even more vital to engage in wholesale transactions. To capture these opportunities, HEPCO aims to further optimize our demand-supply planning and diversify transactions as well as employ professional knowledge and know-how to pioneer our efforts. This will differentiate us from other companies and strengthen our competitiveness, maximizing profits.

#### Optimization of Demand-Supply Planning

#### Advantages of the Demand-Supply Management Center

The Demand-Supply Management Center (Balancing-Group Central Dispatch) operates three shifts covering all 24 hours of the day, preparing demand-supply plans, engaging in transactions in the spot market, and monitoring whether planned levels are simultaneously balanced.

In addition, HEPCO's Balancing-Group Central Dispatch has operation monitoring and control functions for hydroelectric power plants as well as the capability to centrally and dynamically prepare and change operation plans for hydroelectric and thermal power in accordance with demand and supply conditions and market prices in addition to the electric power trading plans associated with that. This is another of HEPCO's strengths.

#### **Development and Adoption of AI Systems**

Together with Grid, Inc., HEPCO is working to develop and introduce demand-supply plan optimization systems utilizing AI (demand-supply planning engines).

The adoption of systems utilizing AI makes it possible to prepare in a short period of time optimized demandsupply plans, including plans for articulated water systems dependent on empirical rules, that are based on complex mathematical programs. This makes an even greater contribution to containing thermal power fuel costs, increasing profits through higher market bids, and enhanced operational efficiency.

In addition, the reduction in CO<sub>2</sub> from thermal power plants contributes to a reduction in emissions from the entire region.



### **Diversification of Transactions**

#### **Brokered transactions**

To execute wholesale transactions that are nondiscriminatory treating HEPCO's retail business units and new power companies the same, HEPCO was the first utility in Japan to introduce a market-system whereby negotiated transactions for delivery in FY2024 are conducted through enechain Corporation, a broker engaged by HEPCO. This has garnered high regard in government advisory councils as these wholesale transactions provide transparency and fairness. This framework has also been recognized as a cutting-edge model.



#### Utilization of electricity futures

As Japan's electricity futures market grows quickly, HEPCO has moved ahead of other former general electricity utilities to participate directly in market transactions since 2022.

As markets have developed and the players increased, the variety of hedge, derivative, and other such instruments has expanded. It is our aim in those markets to leverage the strengths and other advantages of experts with a thorough knowledge of such transactions so as to maximize profit through both the purchase and sale of electric power.

#### Utilization of expert knowledge and know-how



Yasunori Yamanami Group Leader General Trading Group Optimization & Trading Department

With nearly 15 years of experience in trading commodities at a general trading company, Yasunori Yamanami saw electric power liberalization as a major turning point and joined HEPCO roughly 5 years ago. Despite his almost constant initial astonishment at the tremendous difference in corporate cultures, he learned from each of these surprises, accumulating experiences together with HEPCO career employees.

HEPCO's hallmarks are (1) option value that comes from its power generation assets, and (2) a trading

team comprised mostly of outside professionals with specialized knowledge. Just because you have power generation assets does not mean that you will do well trading, nor can only a trading team made up of outside professionals employing armchair theories hope to operate realistically. I feel what has made this a strong trading team is the blend of both outside professionals and personnel who have been with HEPCO for their entire careers. We have reached the point where a broad range of media interests and outside businesses are coming to us to learn about our trading platform. People call us a "group," but we refer to our colleagues as a "team" as we are fully aware that we share the same sense of purpose. That's because, ultimately, it is people that are the foundation of any job.

The world of trading is cutthroat as traders are responsible for the consequences of their trades. We also make split-second decisions that move tremendous amounts of money in response to changes in volatile markets, so this job also entails a lot of tension. I think our team enjoys that pressure and we aim to be the top electric power trading team in Japan.

#### VALUE CREATION INITIATIVES

# **Electricity Retail Sales**

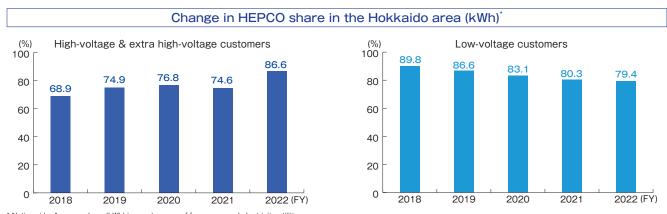
Based in Hokkaido, HEPCO provides a variety of peripheral energy services, which center mainly around retail electricity sales.

Since FY2017, we have also engaged in electricity retailing in the Tokyo metropolitan area.

As needs further diversify with changing customers' lifestyles, energy conservation initiatives, and decarbonization, HEPCO will continue to provide energy services that are tailored to each customer.

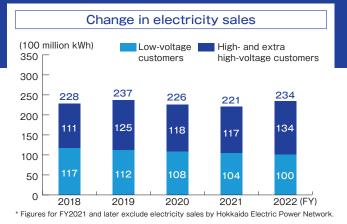
# **Electricity sales**

Since liberalization of electricity retail operations, the environment has become very competitive, which has tended to decrease electricity sales. However, we saw an increase in electricity sales in FY2023 against a backdrop of soaring fuel prices and electricity market prices, which spurred other electricity retailers to suspend operations. Our marketing efforts also paid off with the acquisition of more customers contracting with HEPCO. In FY2023, HEPCO held 86.6% of the high- and extra-high voltage sector and 79.4% of the low-voltage sector.

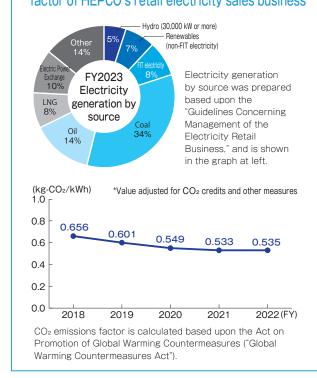


\* Nationwide: Average share (kWh) in supply areas of former general electricity utilities

\* Calculated based upon electric power transaction reports published by the Electricity and Gas Market Surveillance Commission



Change in power source mix and CO<sub>2</sub> emissions factor of HEPCO's retail electricity sales business



# **Revision of Electricity Rates: Low-Voltage Customers**

# Revision of regulated electricity rates (June 2023)

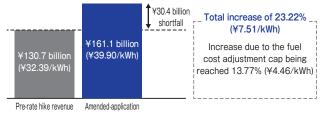
HEPCO filed an application with the government on January 26, 2023 to amend the General Provisions for Specified Retail Service (regulated electricity rates) so that they may be raised on June 1, 2023.

After that, an amended application was filed that reflected details of the government's review and a recalculation of expenses related to demand and supply, which took into account recent fuel price and wholesale price declines. On May 19, the Minister of Economy, Trade and Industry approved the raise, which took effect on June 1.

#### Increase in regulated electricity rates

Of the amended total expenditures of ¥756.2 billion, costs related to regulated electricity rates averaged ¥161.1 billion annually. On the other hand, if the rates prior to the increase had been kept in place, revenue would average no more than ¥130.7 billion annually, an estimated shortfall of ¥30.4 billion.

The extent of the increase, which takes into account the aforementioned, is 23.22%, of which 20.64% comes from an increase in retail rates and 2.58% from an increase in wheeling charges under the new wheeling rate system.



(regulated electricity rates) costs

#### **Revision of calculation basis**

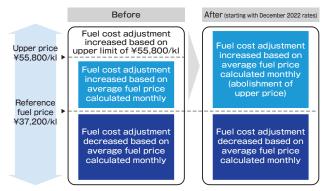
The basis for calculating the basic fuel cost adjustment rate unit was revised in line with changes in fuel prices and power source mix for the cost calculation period.

Fuel prices								
	Before After							
Exchange rate (JPY/USD)	87	139						
Crude oil-CIF (\$/b)	113	95						
LNG-CIF (\$/t)	_	955						
Coal-CIF (\$/t)	120	383						

#### Basis for calculation of basic fuel cost adjustment rate unit

		Before	After
Reference price		0.197	0.173
Reference fuel price (JPY/kl)		37,200	80,800
Conversion factor	α (Crude oil)	0.4699	0.1874
	β (LNG)	_	0.0899
factor	۲ (Overseas coal)	0.7879	1.0036

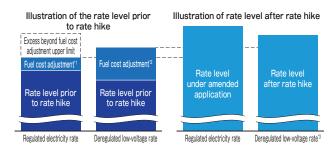
# Fuel cost adjustment scheme upper limit rescinded for deregulated low-voltage rates (December 2022)



\* Reference fuel price and upper price limit are as of December 2022

#### Revision of deregulated rates (June 2023)

The deregulated low-voltage rate was also increased based on the level of electricity charges for regulated electricity rates.



\*1 Regulated electricity rate reached the fuel cost adjustment upper limit with charges for August 2022.

\*2 The fuel cost adjustment upper limit was abolished for deregulated low-voltage rates with the charges for December 2022.

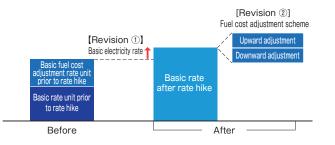
\*3 Refers to Ene-toku Point Plan, Ene-toku Power Plan, Ene-toku Smart Plan, etc.

# **Revision of Electricity Rates: High-Voltage Customers**

#### Revision of high and extra-high voltage rates (April 2023)

Electricity rates were also raised for high and extra-high voltage customers on April 1, 2023.

Illustration of electricity rate hike



#### Revision of basic electricity rate

The increase in the basic rate for high and extra-high voltage service resulted in an increase of 18 to 21% for a model case under most electricity rate plans.

	Electricity rate plan	Contracted electricity demand	Usage	Pre-hike charges	Post-hike charges	Increase (Percentage)
o Hin	Commercial use (General rate)	60kW	10,500kWh	¥430,000	¥520,000	¥90,000 (+21.2%)
High-voltage customers	High-voltage electricity (General rate)	80kW	18,900kWh	¥700,000	¥850,000	¥150,000 (+20.8%)
rs se		920kW	333,500kWh	¥11.49 million	¥13.78 million	¥2.29 million (+19.9%)
Extra voltage c	Commercial use A (60kV)	2,550kW	765,300kWh	¥26.54 million	¥31.42 million	¥4.88 million (+18.4%)
Extra-high voltage customers	Extra-high voltage customers A (60kV)	4,100kW	1,025,000kWh	¥35.92 million	¥42.8 million	¥6.88 million (+19.2%)

\* Pre-hike charges include the fuel cost adjustment for January 2023.

\* Post-hike charges did not include the amount of the fuel cost adjustment.

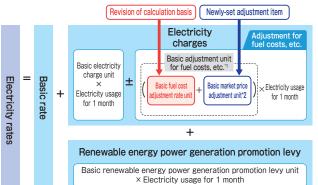
\* Pre-hike and post-hike charges include the amount equivalent to consumption taxes, etc. and the renewable energy power generation promotion levy applicable at the time rate hike implemented (¥3.45/kWh).

\* Power factor calculated as 100%

\* High-voltage does not include a discount of ¥3.5/kWh based on the government's measures to mitigate drastic fluctuations in electricity and gas prices.

#### Revision of fuel cost adjustment scheme

The mix of power sources upon which the fuel cost adjustment scheme is premised was updated and the basis for calculating the reference fuel price and other basic adjustment units revised, and a new basic market price adjustment unit introduced that reflects changed wholesale market prices in electricity rates.



\*1 Basic fuel cost adjustment rate unit includes the basic outlying island universal service adjustment rate unit.

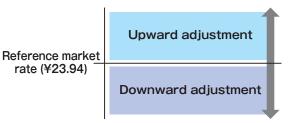
\*2 The Hokkaido area price for the spot market as released by the Japan Electric Power Exchange is used for the market price referenced.

#### **Revision of calculation basis**

		Before	After
Reference price	High-voltage	0.189	0.188
(¥/kWh)	Extra-high voltage	0.184	0.183
Reference fuel price (JPY/kl)		37,200	89,500
Conversion factor	α (Crude oil)	0.4699	0.1946
	β (LNG)	_	0.0827
	۲ (Overseas coal)	0.7879	1.0081

#### Newly-set adjustment item

With the introduction of a basic market price adjustment unit, the average market price, which fluctuates monthly, is adjusted upward if the reference market price rises, and adjusted downward if the reference market price falls.



The approach to the basis for calculating the basic market price adjustment unit is outlined below.

<ol> <li>Reference market price</li> </ol>	Reference value for market price adjustment set based upon the electricity market price from September to November 2022.
② Adjustment factor	Reflection of the wheeling loss rate and consumption tax rate in a percentage reflecting fluctuation in the average market price in the basic market price adjustment unit. (High-voltage: 0.229, Extra-high voltage: 0.223)
③ Average market price	Calculated as a weighted average of the full-day and daytime spot market prices* for the Hokkaido area during the calculation period.

\* The full-day spot market price is a simple average of the spot market price from midnight until midnight of the following day, and the daytime spot market price is the simple average of the spot market price for the time period from 8 o'clock until 16 o'clock.

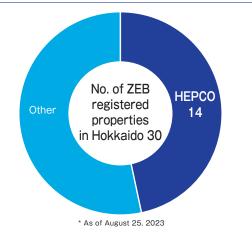
# Launch of Services for Achieving Carbon Neutrality

#### **ZEB** Consulting

HEPCO was the first electric power company to register as a ZEB (Net Zero Energy Building) Planner in FY2018, enabling us to provide ZEB consulting services to HEPCO customers. As a ZEB pioneer in Hokkaido, we work together with Hokuden Sogo Sekkei Corporation to support our customers in converting to ZEB with services ranging from the adoption of carbon neutral-compliant heat pumps and energy-saving technologies during planning and design all the way through energy analyses and operational improvements during construction and even after completion.

The ZEB Ready Bihiro Town Office Building Project garnered recognition for the support provided to employees and operational ingenuity after installation. The project was twice honored with awards: the "Hokkaido Energy Conservation and New Energy Promotion Grand Prize" presented by the Hokkaido Economic Division in 2022 and the "Northern Provinces' Energy Conservation and New Energy Promotion Grand Prize" presented by METI's Hokkaido Bureau of Economy, Trade and Industry the same year.

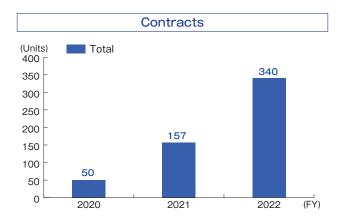
#### No. of ZEB Leading Owners registered in Hokkaido



#### **Offering Carbon-Free Plans**

HEPCO offers Carbon-Free Plans, which use 100% renewable energy and emit zero CO2, to assist our customers in their environmental management efforts from the perspective of the electricity supply.

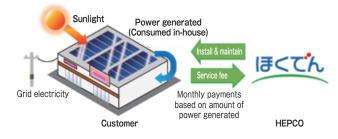
In April 2023, we also rolled out plans that can meet the needs of our customers who wish to be RE100-compliant by making use of FIT Non-Fossil Certificates with Tracking.



# Solar Power PPA (Facility Installation, Ownership & Electricity Supply) Services

This service installs solar power generation facilities at customers' sites, buildings, and other properties, enabling them to use renewable electric power produced by the solar power generation facility at a monthly service rate without having to shoulder the initial investment.

#### Illustration of on-site PPA



#### Flat Solar, HEPCO's solar power installation service

This service is available to customers building a new house, who would like to install a solar power generating system without having to defray the initial cost.

HEPCO has a range of options to choose from, including storage batteries, ECO-CUTE, and EV recharging systems.

#### [Four Benefits]

charge after 10 years

 No initial cost System may be used for a "flat" fee (affordable fixed charge)
 Zero repair cost if system breaks down
 Electricity may be used even during a service interruption
 Transferable with zero

### VALUE CREATION INITIATIVES

# **Power Transmission and Distribution Business**

# Overview of Hokkaido Electric Power Network Co., Ltd.

Hokkaido Electric Power Network Co., Ltd.'s principal operations comprise a general transmission and distribution network throughout Hokkaido and power generation systems on outlying islands. The company strives to efficiently operate the power transmission and distribution network so facilities and equipment arrayed across a vast area are always maintained in sound condition, enabling the provision of a stable and inexpensive supply of electricity.

In addition, we are doing our utmost to expand the use of renewable energies in Hokkaido, a treasure trove of natural energy, in order to contribute to achieving carbon neutrality.

Distri	bution System	Power Generation Facilities		
Transmission line route length	8,459km	Hydroelectric power stations	3 w/ 0.4MW capacity	
No. of support structures	45,316	Thermal power stations	4 w/ 17MW capacity	
Substations	401 w/ 24,598MVA capacity	Breakdown		
Distribution line route length	68,384km	Internal combustion	4 w/ 17MW capacity	
No. of support structures	1,486,318	Total	7 w/ 17MW capacity	

Distribution and power generation systems are current as of March 31, 2023

# Hokkaido's Business Environment and Network Operation Challenges and Strategies

Over the past 10 years, demand for electric power in Hokkaido has decreased considerably. Also, recent years have seen natural disasters intensify, necessitating facility and equipment countermeasures to a greater extent than in the past. Power transmission and distribution equipment is aging and interconnections with solar, wind, and other naturally fluctuating power sources are expanding. The challenges that we face are more diverse and complex than ever before.

# Demand for Electric Power in Hokkaido

Demand for electric power has been on a downward trend due to a faster decline in population in Hokkaido than the rest of the country as well as advancements made in conserving and saving energy.



270 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 (FY)

#### Meeting Challenge ①: Promoting Electrification

HEPCO is actively engaged in projects promoting the use of electric vehicles and adoption of high-efficiency electrical appliances that appeal to the convenience and comfort electricity provides.



Hokkaido Business EXPO exhibit showing different ways electric vehicles may be used

#### Meeting Challenge 2: Attracting Companies to Hokkaido

Together with interested local governments, business parks, and other entities, Hokkaido Electric Power Network Co., Ltd. supports efforts to attract companies to Hokkaido from the standpoint of expanding demand through an increase in local production and consumption of renewable energy as well as promotion of the IT sector. We respond to inquiries and consultations from customers considering moving operations to Hokkaido.

More specifically, we address all types of inquiries relating to the establishment of data centers and other facilities making use of the cool climate. We provide information about transmission and distribution systems in areas businesses are considering as well as offer the most economically efficient sites based on a consideration of communications and other infrastructure conditions.



HEPCO Group 41 Integrated Report

# Expansion of Renewable Energy Connections

The Hokkaido area offers greater potential for renewable energies than the rest of the country. Renewable energy grid capacity in Hokkaido as of March 2023 was 2.21 million kW for solar, 790,000 kW for wind, 610,000 kW for biomass, and 30,000 kW for geothermal, surpassing the annual electric power average for the Hokkaido area (approx. 3.4 million kW).



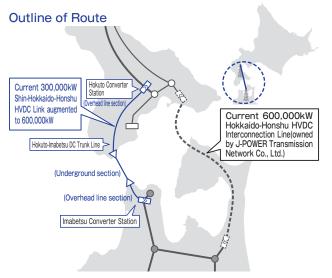
With such a large amount of renewable power connected to the grid, we, as a general transmission and distribution operator, will need to do more to further expand connections. Accordingly, the challenges we face now include reinforcing regional HVDC links as well as installing and operating equipment contributing to grid stability.

### Meeting Challenge ①: Reinforcing the Hokkaido-Honshu HVDC link (Shinshin-Kitahon)

Pursuant to the Cross-Regional Grid Development Plan Concerning Interconnection Links Between Hokkaido and Honshu which was drafted in May 2021 to stimulate wide-area electric power transactions, reinforce resilience, and further expand adoption of renewable energies, we have started work on augmenting 300,000 kW (Shinshin-Kitahon) with the aim of commencing operation in March 2028 along the same route as the current Shin-Hokkaido-Honshu HVDC Link.

#### **Project Overview**

AC-DC converter	Hokuto Converter Station AC-DC Conversion System 300,000 kW added
stations	Imabetsu Converter Station AC-DC Conversion System 300,000 kW added
DC	One 250kV overhead line added (Hokuto~Yoshioka CH 77km)
transmission	One 250kV underground line added (Yoshioka CH~Tappi CH 24km)
lines	One 250kV overhead line added (TappiCH~Imabetsu 21km)
AC transmission line	One 275kV overhead line partially added [constructed by Tohoku Electric Power Network Co., Inc.](Imabetsu Trunk Line Aomori~Imabetsu Trunk Line No. 124 Pylon 39km)
Other	System improvements

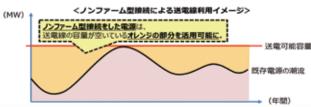




Current Shin-Hokkaido–Honshu HVDC Link (photo taken from Aomori). Hokkaido can be seen across the Tsugaru Strait.

#### Meeting Challenge 2: Non-firm connections

Power sources connected to the grid operate depending upon demand and weather (sunlight and wind conditions), so the capacity of the transmission system is not necessarily always used to its fullest. In areas where capacity of transmission lines and other equipment is available, transmission systems are utilized and new power sources are connected. This is what is referred to as non-firm connections. In April 2023, non-firm connections began to be applied to all systems, and HEPCO will strive to further expand renewable energy connections.



Source: Excerpt from material for the METI Subcommittee on Mass Introduction of Renewable Energy and Next-Generation Electricity Networks (20th Session)

#### Meeting Challenge 3: Dynamic Line Rating

The introduction of non-firm connections makes use of available capacity of current systems, so the connection may be made without having to augment the system. However, when the grid is congested, power source output is suppressed. Because grid congestion reduces the frequency of output curbs, a dynamic line rating system will be introduced for transmission lines, making it possible to temporarily increase transmission line capacity in real time in response to transmission line conditions. In addition, depending upon the extent of the grid congestion, system application can be expanded. We will strive to expand renewable energy connections and decrease the frequency of output controls as we maximize the use of current equipment.

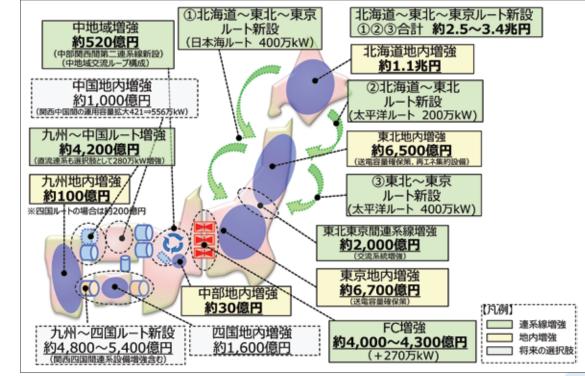
# TOPICS

#### Master Plan for Wide-Area Interconnected System

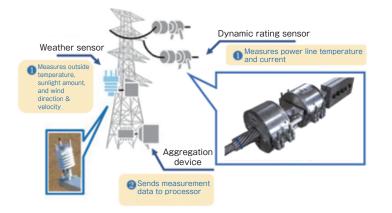
In March 2023, the Organization for Cross-Regional Coordination of Transmission Operators, Japan compiled a long-term policy for wide-area systems that includes its "Long-Term Policy for Wide-Area Grid" which is a detailed picture of future wide-area interconnected systems that anticipates achieving carbon neutrality by 2050 as well as specific initiatives for realizing that target. Hokkaido Electric Power Network is actively cooperating toward realizing this master plan for wide-area interconnected systems to contribute to expanding the use of renewable energies in Hokkaido.

#### **Plan Formulation Process**

One specific measure of the master plan that was initiated on July 20, 2022 was the process for formulating plans for a new Hokkaido-Tohoku-Tokyo route by the Organization for Cross-Regional Coordination of Transmission Operators, Japan, the entity requested by the Japanese government to review improvement of wide-area systems toward achieving the goal of introducing renewable energies by 2030. Hokkaido Electric Power Network has been actively cooperating with the review for reinforcing the Hokkaido grid and DC power transmission between Hokkaido and Honshu.



Source: Excerpt from "Long-Term Policy for Wide-Area Grid (Master Plan for Wide-Area Interconnected Grid)" published by the Organization for Cross-regional Coordination of Transmission Operators, Japan (OCCTO) in March 2023



# Intensifying Natural Disasters

Recent years have seen an intensification of natural disasters in Hokkaido's harsh natural environment, and more countermeasures will be necessary to protect equipment in the future.

HEPCO has been advancing initiatives to enhance the resilience of our power transmission and distribution network to meet the challenges posed by these sorts of environmental changes.

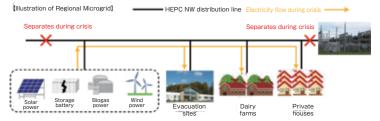
#### Meeting the Challenge: Regional Microgrid Construction Project

The Regional Microgrid Construction Project is an initiative that aims to supply electricity to everyone in a community when a natural disaster or other such event causes a large-scale blackout. The project will separate specific areas from the Hokkaido Electric Power Network's transmission and distribution network so that communities are supplied with electricity through biomass power generation facilities, wind farms, solar power generation systems, and other such facilities within that particular area.

This project is currently being promoted through the Regional Microgrid Construction Project Consortium in two areas: Matsumae Town in Matsumae District and Akan-cho Teshibetsu in Kushiro City.

A regional microgrid started operating in Akan-cho Teshibetsu, Kushiro City in May 2023. Together with the operator, carefully thought-out countermeasures have been arranged that contribute to enhancing resilience in the community so that the microgrid will be able to operate appropriately during a large-scale service interruption caused by a disaster or other such event.

As for the regional microgrid in Matsumae Town, Matsumae District, the aim is to commence operation this fiscal year and preparations will continue to move forward to verify operations on-site.



\* Regional Microgrid

An energy system that utilizes the existing power distribution network, but separates a specific area from other electric power systems when a disaster results in a large-scale blackout and then utilizes renewable energy or other sources to supply electricity.

# TOPICS

#### Responding to Collapse of the 66kV Monbetsu-Higashi Line Pylon

In December 2022, a snowstorm that was part of a low-pressure system resulted in the collapse of one power transmission pylon.

To ensure reliability of the electric power supply, Hokkaido Electric Power Network quickly constructed temporary steel pillars and restored one line within five days. Restoration of the second line was completed in early March 2023 after construction of a steel pylon.

In response to this steel pylon collapse, a review was conducted with the cooperation of outside experts, research institutes, concerned manufacturers, and others to determine the cause of the steel pylon collapse and consider measures to prevent such a recurrence. Along with the previously-implemented measure of attaching rings at fixed intervals to prevent snow from accumulating on the power lines, it was decided to place twister dampers along the lines, which are expected to further enhance the effectiveness of snow accretion prevention.



Temporary steel pillars

Snow-resistant ring



Construction of steel pylons restored service

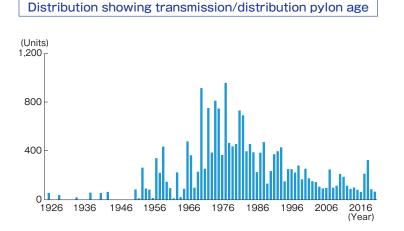


Twister damper

# Aging Power Transmission & Distribution Equipment

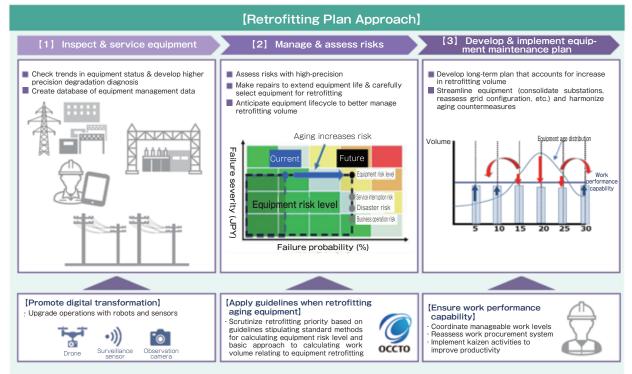
Much of the power transmission and distribution equipment currently set up in the Hokkaido area was installed during the period from the 1950s through 1970s, which was the period of high economic growth.

As a consequence, equipment retrofitting is expected to reach a peak in the future. To handle the increase in volume of equipment to be retrofitted, it will be necessary to even out the level of construction work to be performed.



#### Meeting the Challenge: Construction Plans Taking Retrofitting Timing & Construction Capability into Account

We will ensure a stable supply of electric power by systematically constructing countermeasures for aging equipment while evening out the volume of work in a way that takes into account when retrofitting will peak and the capability needed to perform the work.



# Wheeling Rate System (Revenue Cap System)

#### **Overview of Revenue Cap System**

In April 2023, a new wheeling rate system, also known as the Revenue Cap System, was introduced to balance the need to secure investment funds necessary for transmission and distribution systems and enhance cost efficiency as well as to make renewable energy a core energy source and reinforce the resilience of power transmission and distribution systems.

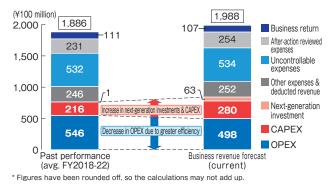
Under the Revenue Cap System, general electric power transmission and distribution operators formulate business plans that clarify the targets to be reached within a certain period of time, calculate maximum revenue by estimating the costs necessary for implementation of the plan, and then set wheeling rates within that range after approval from the government.

When the five-year regulatory period ends, the government reviews and assesses the extent to which the business plan has been achieved with the results reflected in the maximum revenue set for the next five-year regulatory period.

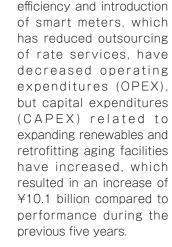
For example, deviations between the approved revenue limit and actual revenue due to fluctuations in demand during the regulatory period will be included in the calculation of maximum revenue for the next five-year regulatory period.



The revenue forecast for the coming five years (FY2024 to 2028) was reviewed and verified by the government, then approved at an annual average of ¥198.8 billion.

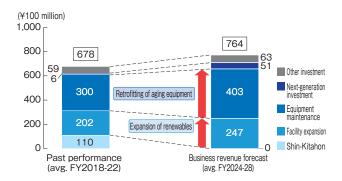


Based on this, the basic wheeling rate unit to be levied starting in April 2023 is an average of  $\pm$ 6.89 per kWh, which is an increase of 9.9% compared to the rate for unrevised revenue. The enhancement of personnel



#### Equipment Investment Plan for the Next Five Years

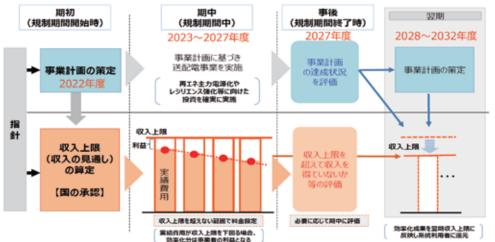
Average annual investment over the next five years (FY2024 to 2028) is forecast to be ¥76.4 billion or an increase of ¥8.5 billion compared to the previous five years. This is based upon the plan formulated that takes into account expanding the introduction of renewable energies and a cost-benefit assessment of aging equipment.



# Hokkaido Electric Power Network's Profit Level Since Revenue Cap System Introduction

In FY2023, Hokkaido Electric Power Network sustained an ordinary loss due to an increase in balancing expenses as well as low demand for electricity in Hokkaido, which was the result of energy conservation efforts and the impact of the pandemic.

Since introduction of the Revenue Cap System, a business plan has been drafted that reflects these recent circumstances, so we believe that we will be able to secure a certain level of profitability necessary for stable business operation while also budgeting for expenses and investments that will expand adoption of renewable energies and provide a stable supply of electric power.



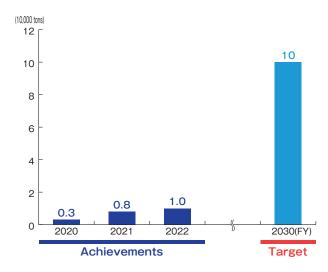
Source: Cited and partially amended based on material from the 10th session of the Meeting of Experts on the Rate System under the Electricity and Gas Market Surveillance Commission

### VALUE CREATION INITIATIVES

# Peripheral Businesses

# Gas Supply (LNG Sales)

# Management Vision 2030 Target 100,000 tons+/year

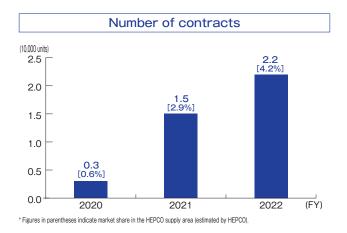


# **City Gas**

In FY2023, HEPCO had approximately 22,000 contracts for our city gas business.

To encourage customers throughout central Hokkaido to choose Hokuden Gas, we have not only expanded the gas rate plans which we offer, but also services to include the new Anshin Alarm Plus option that leases gas alarms and extended service plans under our Kaketsuke Plus providing gas equipment support.

We will continue to actively market Hokuden Gas and offer services tailored to our customers' needs so that more and more Hokkaido residents choose us for their electricity and gas needs.



# LNG Supply

HEPCO Group launched our LNG supply business in 2018, the year when we began receiving LNG for use in Ishikariwan-Shinko Power Station, our first LNG-fired thermal power plant. We have been working towards achieving our initial goal of selling 10,000 tons annually.

With our stable LNG procurement for power plants as a foundation, we have the capacity to meet the needs of a range of customers from those demanding a large supply to others needing small amounts for demonstration projects. We estimate sales this fiscal year to exceed 20,000 tons.

As we move forward, we will promote the merits of utilizing LNG to reduce CO<sub>2</sub> to a broad range of customers seeking to go carbon neutral. We will pioneer demand with an appeal to converting to LNG, while interweaving our marketing with packages providing energy facilities (ESP business).

In addition, we will also be vigorously promoting our services to city gas businesses and customers already using LNG in an effort to grow sales.



# Hydrogen Business Initiatives

Hydrogen emits no CO<sub>2</sub> during use and has excellent high-energy efficiency for use in fuel cell technology. In addition, surplus renewable energy can be converted to hydrogen for storage and later utilization so that the potential of renewable energy sources may be maximized. This makes it a key carbon-free technology available for a variety of applications.

Partnering with the national government, prefectural government, local municipalities, and other companies, we will produce hydrogen from the abundance of renewable energy in Hokkaido and construct a hydrogen supply chain, which will be available to a variety of sectors, with the aim of making Hokkaido a hydrogen-energy society pioneer.

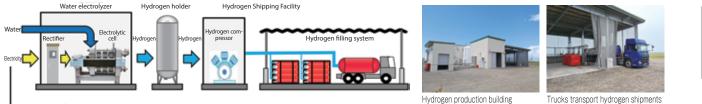
# Hydrogen Production Facility Installed and Operating in Tomakomai City

A 1 MW class hydrogen production facility, the largest in Hokkaido, was set up in Tomakomai City. This facility began operating in May 2023.

The hydrogen produced is sold to other companies and used in the adjacent Tomato-Atsuma Power Station.

We anticipate the facility will absorb output fluctuations as more renewable energy is installed, so we intent to evaluate the facility's performance as we work to establish the technology for operating and maintaining such a facility in a cold climate.

#### **Overview of Hydrogen Business**



\* In the future, renewable energy-derived electricity will be used



Supply side

Hydrogen used in

ndustrial applications

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e.g. hydrogen-reduced stee

Kitahon HVDC Link

Illustration of

Future Hydrogen Use in Hokkaido

Transport hydrogen outside Hokkaido Illustration of

power supply system

Expand installation of non-fossil power sources Expand electrification in each sector

Hydrogen station

communities

Railway fuel

Aviation fue

Hydrogen used for residential fuel cells

Hydrogen and ammonia

power generation

Transport hydrogen

outside Hokkaido

Means of transportation in

Fuel for long-distance

freight transport

Use CO<sub>2</sub>-free hydrogen

Demand side

Convert fossil-fuel energy to non-fossil fuel energy

Ship fuel

# Survey for Construction of Large-Capacity Green Hydrogen Supply Chain in Hokkaido

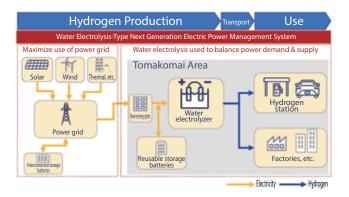
Together with other operators\*, we conducted a survey with the aim of constructing a large-capacity green hydrogen supply chain in Hokkaido.

The survey examined the possibility of constructing a supply chain for domestically-produced green hydrogen assuming a case where a water electrolyzer (100 MW class) is installed that produces the largest amount of domestic green hydrogen in the Tomakomai area. A review was conducted looking at utilizing this domestically-produced hydrogen to provide balancing capacity as well as a means of effectively utilizing surplus electric power.

\* ENEOS Corporation, JFE Engineering Corporation, Hokkaido Electric Power Network, Inc., and Deloitte Tohmatsu Consulting LLC

In addition, we have ascertained electric power market prices, demand-supply conditions, and other factors in the process of considering the Water Electrolysis-Type Next Generation Electric Power Management System, which will effectively utilize surplus renewable energy in Hokkaido to reduce hydrogen production costs while optimally controlling water electrolyzers and reusable storage batteries.

The knowledge gained from this survey will be put to use in our aim to realize a carbon neutral society by expanding renewable energy power installations and decarbonizing industrial and transport sectors that are difficult to electrify so that we may contribute to greater energy self-sufficiency. (Survey period: October 2022 ~ September 2023)



# **HEPCO Group Projects**

HEPCO Group is also engaged in the installation of electrical facilities and projects involving information communication. We seek to capture opportunities that fulfil our customers' needs and address the diverse challenges that society faces, including the construction of facilities as renewable energy installations expand, data centers built as digital transformation evolves, as well as the provision of cloud services and other IT projects. We are bringing together the technological capabilities of the HEPCO Group to advance such projects.

### Increase in Orders for Renewable Energy-Related Construction: Focusing Also on Wind Power Generation and Storage Batteries

It is essential that renewable energy installations be expanded to achieve carbon neutrality. In Hokkaido which is known as a "treasure trove of renewable energy," Hokkaido Electrical Construction Co., Inc. has demonstrated its technical capabilities built up over many years. We are currently receiving many construction project orders for all types of electrical facilities, including installation of wind power generation and large-capacity storage batteries.

#### Wind Power Generation

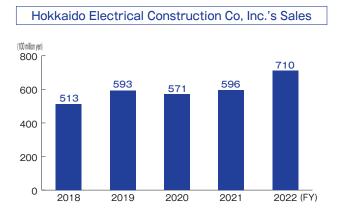
Hokkaido is a region well-suited for wind power generation. There are plans to set up such installations in many localities. Leveraging our wealth of experience in electrical construction, we are marketing solutions appropriately tailored to our customers' needs, such as projects to install substations, transmission lines, and wind turbine internal electricity essential for onshore and offshore wind power generation facilities.

#### **Storage Batteries**

There are great expectations for storage batteries to stabilize renewable energy electric power and provide an emergency power source available for business continuity plans and other such measures, so an increase in installation of such systems is also anticipated in the future. We have accepted orders for a range of storage battery facility projects.

#### **Regional Microgrids**

There has been an increase in projects to set up regional microgrids (systems using renewable energy to help supply electric power in limited community areas), which local municipalities in Hokkaido are planning. We will marshal our technical capabilities enabling us to construct a variety of facilities and systems so as to secure more orders for such projects.



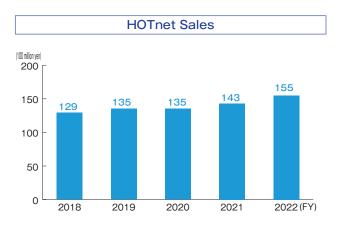
# Further Developing and Expanding IT Services: Opportunities for Rolling out 5G and Advancing Digital Transformation

Advances being made in information communication technology and services are further accelerating thanks to improved digital transformation and cloud computing as well as the rollout of fifthgeneration mobile networks (5G).

Hokkaido Telecommunication Network Co., Inc. (HOTnet) has steadily moved forward with initiatives that appropriately capture information communication technology and social trends as well as customer needs. This has allowed us to provide comprehensive solutions for jointly creating value with customers.

In recent years, we have succeeded in increasing sales through the provision of services that leverage ICT infrastructure covering Hokkaido, advanced technological capabilities, flexibility, and other strengths to meet the increased demand for 5G. Moreover, HOTnet's S.T.E.P. Sapporo Data Center is based in Sapporo, an area where natural disasters have had little impact. This protects customers' IT assets from a range of risks and threats, and increases business continuity. We will continue to steadily build upon the reliable technology and know-how which we have developed to maintain stable operations.





# **HEPCO Group Companies**



### Hokkaido Electric Power Co., Inc.

Electricity business gas supply business, etc. https://www.hepco.co.ip/english/



#### Hokkaido Electric Power Network Co., Inc.

General power transmission and distribution, power generation on outlying islands https://www.hepco.co.jp/network/



# Hokkai Electrical Construction Co., Inc.

Electrical and telecommunications work, civil engineering and construction, work on pipe. air-conditioning and water supply/drainage facilities, disaster prevention facility construction, electricity meter manufacture. maintenance and sales, and inspection agent

https://www.hokkaidenki.co.jp/en/

### HOKUDEN KOGYO Co., Ltd.

Energy-conservation business, coal ash product sales, sales of civil engineering & construction materials, rental condominium & apartment business, hourly & monthly parking lot operations. travel agency, insurance agent, utility pole advertising, automobile leasing, and public bathhouse operations http://www.hokudenkogvo.co.jp/



#### HOKUDEN SOGO SEKKEI Corporation

Comprehensive construction consulting services for civil engineering, construction, electricity, environment, and energy http://www.hokuss.co.ip/





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#### Hokkaido Power Engineering Co., Inc.

The Tomatoh Coal Center Co., Inc.

HOKUDEN ECO-ENERGY Co., Ltd.

Thermal power generation business, commissioned operation of thermal power plants, construction, repair, maintenance, and operation of power generation facilities and various types of plants, and consulting services http://www.hpec.jp/

Receipt, storage and delivery of overseas

http://www.t-coalcenter.co.jp/

coal, maritime transport agent, customs clearance

#### Hokuden Information Technology, Inc.

Consulting, development, operation, management, and training regarding information processing systems, sales of information processing equipment and software, internet data center services, and other information processing-related services https://www.hokuden-it.co.jp/



#### ASSOCIA HOKUDEN ASSOCIA Co., Inc.

Design, printing and bookbinding production of closed caption for broadcasts/videos, sales of novelty and gift products, sales of everyday goods, foods, etc.

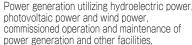


http://www.hokuden-associa.co.jp/ index.html

Leasing of LNG receiving facilities

Ishikari LNG Jetty, Inc.





and consulting services

#### Hokuden Service Co., Inc.

Electricity meter inspection and billing, general services pertaining to repair of residential appliances in all-electric homes, proposals for energy conservation, and energy-saving solutions http://www.hokuden-service.co.jp/

#### HOTmet Hokkaido Telecommunication Network Co., Inc.

Telecommunications services such as ethernet communications networks and internet connections, the installation, maintenance, monitoring and consultingrelated to information communications networks, internet data center services, sales of network-related devices and equipment, and information security services https://www.hotnet.co.jp/





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#### Hokkaido Records Management, Inc.

Improvement of document management. confidential-document destruction and recycling services http://www.hrm.jp/





http://www.hokuden-eco-energy.co.jp/



# **HEPCO Group ESG Initiatives**

HEPCO Group emphasizes Environmental, Social and Corporate Governance (ESG) based on our management philosophy mandating 'respect for humanity, contributions to local communities, and efficient management.' We regard the items below as ESG priorities (material matters) and are rolling out specific initiatives to address these while, at the same time, earnestly grappling with the social challenges raised in SDGs.

material matters

The second s

	Priorities (Material matters)	Key initiatives
Environment	Initiatives for realizing carbon neutrality by 2050	<ul> <li>Initiatives for decarbonizing power sources</li> <li>Promoting electrification in anticipation of achieving carbon neutrality</li> <li>R&amp;D for achieving carbon neutrality</li> <li>Initiatives for building next-generation networks that allow for both the stable supply of electricity and the mass integration of renewable energy</li> </ul>
	Co-create with communities	<ul> <li>Utilize a variety of channels to understand community needs and create new businesses</li> <li>Actively promote alliances with other operators and collaboration with local governments</li> <li>Look for business opportunities that will, for example, make use of open innovation in collaboration with outside entities</li> </ul>
Social	Maximize employee potential	<ul> <li>Promote development of human resources capable of flexibly responding to changes in the business environment as well as modifications in business strategy</li> <li>Promote health management to ensure employees' emotional and physical well-being</li> <li>Promote initiatives to enhance engagement and employee satisfaction</li> <li>Diversity Promotion</li> <li>Put an end to work-related injuries</li> </ul>
6	Thorough compliance and risk management	<ul> <li>Foster a workplace culture that thoroughly maintains compliance</li> <li>Thorough information security measures</li> <li>Promote respect for human rights as concerns stakeholders both inside and outside the company</li> </ul>
Governance	Enhance corporate governance	<ul> <li>Proactively communicate with stakeholders in a way that takes into consideration the Corporate Governance Code and other standards</li> </ul>

#### **Relevant SDGs**



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Sustainable Development Goals: SDGs

Declaration of 17 goals for poverty, hunger, energy, climate change, and other areas that were adopted at the UN Summit in September 2015 and are slated to be achieved by 2030.

# Step 1 **Process for** designating ESG

Along with looking back to examine previous management initiatives, key points are identified which are necessary for promoting management focused on ESG.

# Step 2

ESG priorities (material matters) are consolidated based upon the points identified.

# Step 3

Management policies, including ESG priorities (material matters), are discussed by the Executive Committee which is comprised of executive officers, and views exchanged with outside directors.

# Step 4

The Board of Directors determines management policy, including ESG priorities (material matters).

# **ESG** Highlights

E Environment							
	Concern	FY2021	FY2022	FY2023	Unit		
CO <sub>2</sub> emission factor [adjusted]	н	0.549	0.533	0.535	kg-CO2/kWh		
CO <sub>2</sub> emissions [adjusted]		1,241	1,176	1,252	10,000 tons-CO <sub>2</sub>		
Direct greenhouse gas emissions (Scope 1)		1,280	1,410	1,200	10,000 tons-CO <sub>2</sub>		
Indirect greenhouse gas emissions (Scope 2)	ΗN	0.1	0.1	0.2	10,000 tons-CO <sub>2</sub>		
Other indirect greenhouse gas emissions Emissions (Scope 3)		383	475	629	10,000 tons-CO <sub>2</sub>		



\* For environmental data other than the above as relates to thermal efficiency, industrial waste generated, SOx emission intensity, etc., please check the environmental data published on the HEPCO website. Environmental Data: https://www.hepco.co.jb/english/environment/environmental\_data.html

G Governance							
	Concern	FY2021	FY2022	FY2023	Unit		
Number of directors (number of which are outside directors)*1		12(2)	11(2)	9 (1)	Persons		
Number of corporate auditors (number that are outside corporate auditors)*2		5 (3)	5 (3)	6 (4)	Persons		
Ratio of outside directors		29.4	31.2	33.3	%		
Women directors	Н	2	2	2	Persons		
Ratio of women directors		11.7	12.5	13.3	%		
Board of Directors' sessions		15	14	14	Sessions		
Average ratio of directors attending		98.8	98.7	99.1	%		

\*1 FY2023 figures refer to the number of directors (excluding directors who are members of the Audit & Supervisory Committee).
 \*2 FY2023 figures refer to the number of directors who are Audit & Supervisory Board members.

Data published on this page and other financial and non-financial metrics, figures, etc. pertaining to HEPCO's businesses is available for download on the "Data Downloads" page of our website, using the link below.

Data Downloads (Fact Book) https://www.hepco.co.jp/english/ir/datadownloads.html

H: Hokkaido Electric Power Co., Inc., N: Hokkaido Electric Power Network, Co., Ltd. and G: HEPCO Group

S Social									
		Concern	FY2	021	FY2	022	FY2	023	Unit
	Total		5,124	(100.0)	5,065	(100.0)	5,000	(100.0)	Persons (%)
Employees / % of women	Men		4,719	(92.1)	4,640	(91.6)	4,570	(91.4)	Persons (%)
	Women	HN	405	(7.9)	425	(8.4)	430	(8.6)	Persons (%)
	Total		21	1.1	21	.0	21	.0	Years
Average years of service	Men		21	.2	21	.1	21	.1	Years
	Women		20	).4	20	).2	19	9.8	Years
	All employees		-	-	-	-	61	.3	%
	Regular employment	Н	-	_	-	-	79	9.5	%
Difference between wages	Temporary employment		-	-	-	-	38.7		%
of men and women	All employees				54.5		%		
	Regular employment	Ν	-		-	_		7.8	%
	Temporary employment		-	_	—		87.7		%
Number hired / % of women	Total		152	(100.0)	174	(100.0)	154	(100.0)	Persons (%)
(incl. hires with career	Men	ΗN	135	(88.8)	150	(86.2)	129	(83.8)	Persons (%)
experience)	Women		17	(11.2)	24	(13.8)	25	(16.2)	Persons (%)
Number of	Total		658	(100.0)	691	(100.0)	654	(100.0)	Persons (%)
managers / % of women	Men		644	(97.9)	677	(98.0)	639	(97.7)	Persons (%)
or women	Women		14	(2.1)	14	(2.0)	15	(2.3)	Persons (%)
Ratio of women managers		ΗN	2	.1	2	.0	2	.3	%
Paid leave days taken			16	6.6	16	8.5	17	7.2	Days
Rate of annual paid leave taken			83	3.5	82	2.5	86	6.4	%
Percentage of men employees taking childcare leave			9	.4	20	).1	24	1.1	%

# **ESG: OUR VALUE CREATION FOUNDATION**

# Environment

# Addressing Climate Change

As Hokkaido also moves toward decarbonization in response to climate change, HEPCO Group will continue to strive to supply inexpensive and stable energy, regard changes in our business environment accompanying climate change as growth opportunities, and actively strive to develop our businesses.



TCFD: Task Force on Climate-related Financial Disclosures. The Task Force on Climate-related Financial Disclosures (TCFD) ascertains risks and opportunities that climate change has on companies' businesses to urge financial institutions to make appropriate investment decisions taking into account the impact of climate change, and recommends the disclosure of information around four core pillars: strategy, metrics and targets, governance, and risk management. HEPCO Group recognizes that addressing climate change has a direct effect on our business. Based on this understanding, we analyze risks and opportunities as well as disclose information about climate change in accordance with the TCFD framework.

# Strategy

HEPCO Group continues to assess both the risks and opportunities of changes in our business environment that are brought about by climate change In conducting these assessments, we reference data from global scenarios (specific details on p.54). The scenarios assume the global trend will be toward reducing and decarbonizing the energy supply side, electrifying the demand side, and making advances in achieving high-efficiency energy use. This aligns with the direction of the HEPCO Group's initiatives as we take up the challenge to achieve carbon neutrality on both the supply and demand sides.

#### Risks Associated with Climate Change

Description of risk	Time for manifestation	Degree of impact
Increase in costs accompanying tighter laws and regulations as well as policies targeting $\mbox{CO}_2$ emissions	Short-, medium- and long-term	High
Reduction in revenue accompanying decline in utilization of current thermal power due to delays in addressing decarbonization/delay in recouping investments relating to new technologies	Medium- to long-term	Moderate
Decrease in revenue accompanying increase in customers' environmental awareness about electricity	Short-term	Moderate
Reduction in revenue as the competitive environment changes due to installation of large amounts of renewable energies	Medium- to long-term	Moderate
Increasing difficulty in procuring financing with an insufficient ESG response	Medium- to long-term	Moderate
Increase in recovery costs due to more severe and frequent typhoons, snowstorms, and other natural disasters	Short-, medium- and long-term	Moderate
Greater income instability due to changes in weather patterns	Medium- to long-term	High

#### Plan for Reduction of Greenhouse Gases…P.21

#### Opportunities Associated with Climate Change

Description of opportunity	Time for realization	Degree of contribution		
Increase in demand for electric power due to conversion to electricity in the demand for transport and heating both of which are highly dependent upon petroleum-based energy, promotion of adoption of electric vehicles, and attraction of data centers and other such facilities to Hokkaido	Short- to medium-term	High		
Increase in revenue associated with supply of CO <sub>2</sub> -free hydrogen to meet demand that is difficult to electrify	Long-term			
Increase in sales of electric power accompanying promotion of the use of nuclear power generation and renewable energies, such as offshore wind and biomass that leverage Hokkaido's abundant potential	Short-, medium- and long-term	Llich		
Increase in sales of electric power accompanying reduction and decarbonization of thermal power generation achieved through practical application of innovative technologies	Medium- to long-term	High		
Diversification and stabilization of procurement of financing through green bond issues, etc.	Short-term	Moderate		
Increase in demand and assurance of the advantages of electricity thanks to enhanced reliability achieved through early recovery	Short- to medium-term	Moderate		
(Time to manifest/realize) Long-term: over 10 years, medium-term: 10 years, short-term: 5 years				

(Degree of impact/contribution) High: over ¥10 billion/year, moderate: ¥1 billion~several billion/year, low: several hundred million yen/year

HEPCO Group set a target of doing our utmost to meet the challenge of achieving carbon neutrality for all energy in Hokkaido.

We are aiming to eliminate CO<sub>2</sub> emissions from our power generation division through supply-side initiatives that include expanding our renewable energy power generation business, restarting as soon as possible Tomari Nuclear Power Station which does not emit CO<sub>2</sub> during power generation, utilizing Ishikariwan-Shinko Power Station which is a highefficiency LNG-fired thermal power plant, and introducing innovative technologies such as hydrogen, ammonia, and CCUS. Our demand side initiatives include promoting electrification in demand for heating and other areas specific to Hokkaido as well as moving forward with reviews on how to best utilize hydrogen produced from CO<sub>2</sub>-free electricity.

#### **Reference Scenarios**

When assessing climate change opportunities and risks, we reference scenarios prepared by the International Energy Agency (IEA) and Intergovernmental Panel on Climate Change (IPCC).

The IEA scenario utilizes assessments of risks and opportunities accompanying the transition to a reduced and carbon-free society, and the IPCC scenario utilizes assessments of physical risks, such as the frequency of natural disasters.

#### Reference scenarios

This scenario presents assumptions that to realize a reduced and decarbonized society, the energy supply-side will reduce and eliminate CO<sub>2</sub> and the construction, transport, and other demand sectors will expand electrification and use energy with greater efficiency. More specifically, it is anticipated that the use of fossil fuels for supplying energy will decrease.

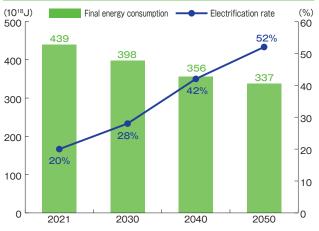
(IEA) the demand-side will see greater use of high-efficiency heat pumps, electric products, and electric vehicles, and energysaving initiatives will advance further. With final energy consumption decreasing as we move toward 2050, it is assumed that demand for electric power will increase and

1.5℃

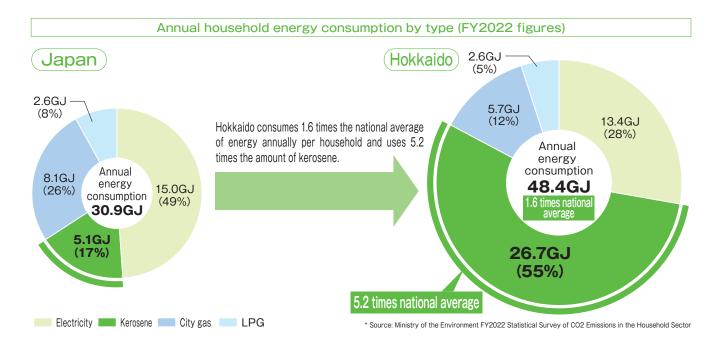
4°C This scenario assumes that heavy rains will increase in scenario intensity and frequency in the future as global warming progresses.

the rate of electrification will rise (see diagram on the right).

**Global Final Energy Consumption and Electrification Rate** 



<sup>\*</sup> Source: IEA's "World Energy Outlook 2022." Released pursuant to the CC BY-NC-SA 4.0 license



### Climate-Related Opportunities in Hokkaido, the HEPCO Group's Business Foundation

According to estimates by national research institutes, Hokkaido's population will likely decrease in the future. Nevertheless, if we focus on energy consumption in Hokkaido's household sector, we see the region highly dependent upon petroleum-derived energy compared to the rest of the nation as energy is used for heating and other uses during winter due to the region's cold winters with much snowfall. As such, we believe Hokkaido holds enormous potential for increasing the rate of electrification.

# **Indices and Targets**

With the aim of achieving carbon neutrality across the energy spectrum in Hokkaido by 2050, we have set quantitative targets for reducing emissions of greenhouse gases, and disclosed our performance toward reaching those targets. In addition to efforts to expand adoption of renewable energy, restart Tomari Nuclear Power Station soon, and reduce and eliminate CO<sub>2</sub> in thermal power generation, HEPCO Group will make use of hydrogen and other innovative technologies as well as mobilize all available means to achieve our goals.

### Greenhouse Gas Reduction Targets

Target FY	Target
FY2031	• Reduce CO <sub>2</sub> emissions from the power generation division by more than half compared to FY2014 level (decrease of 10 million tons plus/year) [FY2014 CO2 emissions: 18.92 million tons]
FY2051	• Do our utmost to achieve carbon neutrality in every energy source in Hokkaido

### Recent Performance

#### HEPCO Group Power Generation Division CO<sub>2</sub> Emissions

	FY2014	FY2021	FY2022	FY2023
Emissions	18,920,000 tons-CO2	13,570,000 tons-CO2	14,410,000 tons-CO2	12,190,000 tons-CO2
Compared to FY2014	-	△28% (△5.35 million t)	△24% (△4.51 million t)	△36% (△6.73 million t)

#### Greenhouse Gas Emissions Across Supply Chains<sup>1</sup> [10.000 tons-CO<sub>2</sub>]

			[10,000 toris-002]
Scope	FY2021	FY2022	FY2023
Scope 1 Direct greenhouse gas emissions	1,280	1,410	1,200
Scope 2 Indirect greenhouse gas emissions from utilizing electricity and heat supplied by other companies	0.1	0.1	0.2
Scope 3 Other indirect greenhouse gas emissions	383	475	629
Category 1 Products & services purchased	24	21	27
Category 2 Capital goods	0	0	0
Category 3 Fuel and energy activities not included in Scope 1 or 2	355	448	596
Category 4 Transport, distribution (upstream)	0.3	0.3	0.3
Category 5 Waste produced by businesses	3.6	3.8	3.3
Category 6 Business travel	0.1	0.1	0.1
Category 7 Employees' commuting	0.2	0.2	0.2
Category 8 Leased assets (upstream)	_*2	_*2	_*2
Category 9 Transport, distribution (downstream)	_*2	_*2	_*2

			[10,000 tons-CO2]
Scope	FY2021	FY2022	FY2023
Category 10 Processing of products sold	_*2	_*2	_*2
Category 11 Use of products sold	0.7	2.1	2.8
Category 12 Disposal of products sold	_*2	_*2	_*2
Category 13 Leased assets (downstream)	_*2	_*2	_*2
Category 14 Franchises	_*2	_*2	_*2
Category 15 Investments	_*2	_*2	_*2

\*1 Performance of Hokkaido Electric Power and Hokkaido Electric Power Network \*2 Not calculated due to weak relationship with business, among other factors. Category 1 (Data on the amount of goods and services purchased) × (Emissions intensity) Category 2 (Increase in costs book relating to fixed assets) × (Emissions intensity) Category 3 (Amount of power received from other companies) × (Emissions factor of alternative values) Category 4 (Amount of heat consumed by type, such as vehicles and ships) × (Emissions intensity) Category 5 (Industrial waste output) × (Emissions intensity) Category 6 (Number of employees) × (Emissions intensity)

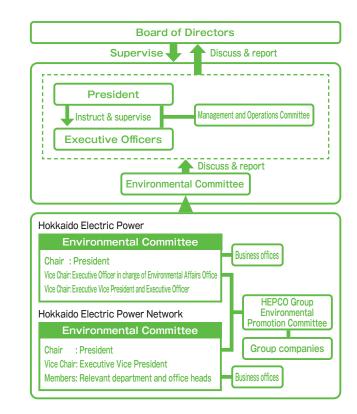
Category 7 (Number of employees for each work pattern and city sector) × (Emissions intensity) Category 11 (Total amount of gas sold) × (Emissions intensity)

Other metrics and targets relating	ESG Highlights · · · · · · P52
to the environment are presented	Environmental Management Targets and Performance · P58
on the following pages.	• SASB INDEX · · · · · · · P89~90

# Governance & Risk Management

The Management and Operations Committee, which is comprised of the President and other executive officers, deliberates HEPCO Group management policies and specific measures, including climate change measures. Moreover, the Board of Directors makes decisions about the execution of business-critical items.

The Management and Operations Committee as well as the Environmental Committee, which is chaired by the presidents of HEPCO and Hokkaido Electric Power Network, hold deliberations to identify climate change risks and opportunities as well as assess the magnitude of such impact. These committees review risks that may have a significant impact on our business and reflect those considerations in group management policies and other principles.



# Proactively Working on Solutions to Global and Local Environmental Issues

# [HEPCO Group Environmental Policy](Revised December 2021)

#### Environmental philosophy

We, the HEPCO Group, recognize that environmentally friendly initiatives are vital to achieving a sustainable society and that reducing our environmental impact is important in all fields and aspects, including addressing climate change issues and implementing measures for regional environmental conservation. As a corporation rooted in Hokkaido with its abundant and rich nature, we will strive to reduce the environmental impact associated with our business activities and preserve the natural environment while also pursuing sustainable business growth and realizing a sustainable society by contributing to the regional economy with a stable supply of inexpensive energy.

#### **Environmental Guidelines**

- Contribute to global warming countermeasures and carbon neutrality Contribute to the decarbonization of energy supply and demand by expanding adoption of renewable energy, utilizing nuclear power generation and innovative technologies, promoting electrification, and implementing other measures.
- Promote regional environmental conservation Reduce the environmental impact associated with business activities and rigorously manage hazardous chemical substances.
- 3. Contribute to creation of a sound material-cycle society Endeavor to consume fewer resources, reuse the resources that we have, and recycle resources used in our business operations, and contribute to establishing a sound material-cycle society.
- Consider biodiversity Identify and assess the environmental impact of business activities and give consideration to biodiversity.
- Disclose environmental information and promote dialogue Proactively disclose environmental information and promote dialogue with stakeholders.



#### Initiative Aligned with the G7 Sapporo Ministers' Meeting on Climate, Energy and Environment

On April 15 and 16, 2023, the G7 Sapporo Ministers' Meeting on Climate, Energy and Environment was held in Sapporo. A commemorative event, Kankyo Hiroba Hokkaido 2023, took place at the same time. From Hokkaido which offers the greatest potential for renewable energies in Japan, various decarbonization initiatives were presented at this event for the global community. HEPCO Group endorsed the aims of this event, which contributes to the global green transformation, so we organized an exhibit.

The exhibit presented a range of initiatives that take into account Hokkaido's particular characteristics so that visitors would be able to form a picture in their minds of the Zero Carbon Hokkaido vision that both the public and private sectors are working to achieve. The displays described how the expansion of renewable energy installations, use of hydrogen, and high-efficiency appliances (heat pumps) are promoting energy avings along with the creation of forests and seas that absorb  $CO_{g}$ .

In addition, we also set up a hands-on workshop for children, who hold the keys to our future, with a Zero Carbon theme so they could make things, touch things, and enjoy learning more about this topic.



# **Environmental Footprint from HEPCO Group's Business Activities**

#### Resources Committed to Business Activities (Inputs) and the Discharge of Environmentally-Burdensome Substances (Outputs)

In HEPCO's business operations, many resources are input to produce electric power. At the same time, CO<sub>2</sub>, waste and other substances that place a burden on the environment are output. We are striving to appropriately manage both inputs and outputs as well as effectively utilize our limited resources to reduce the burden on the environment.

#### ●FY2023 Achievements

	INPUT		Busine			
	Thermal power generation fuels		Electric power			
	Coal 3,600,000 t		Total: 3			
	Heavy oil 874,000 kl		Powe			
	Light oil 22,000 kl		1111			
	LNG 329,000 t					
	Nuclear neuror generation fuel					
	Nuclear power generation fuel					
	Nuclear fuel material consumed O kg		Thermal power gener			
	Renewable Energies		16.487 million k			
	Hydro, geothermal, solar, wind, etc.					
	Water					
	Power station water usage'1 4,507,000 m <sup>3</sup>					
	Office activity					
	Office electricity 44 million kWh		Hydroelectric power gene			
	Vehicle fuel 1.015 kl		3,832 million k			
	Heating & other fuel (crude oil equivalent) 169 kl					
	Office water 150,000 m		Pumping powe			
			-375 million kW			
*1.0	Calculation covers water used at steam and nuclear power sta	tions				
а	after excluding drinking water and condenser cooling water.					
*3 lr	ncludes electric power purchases from other companie ncludes the amount for HEPCO Group companies (Hokk		Der			
	Power Engineering Co., Inc.)	ant	Pov			

- \*4 Volume of water discharged from wastewater treatment facilities.
- \*5 Due to rounding off, figures may not add up precisely to the totals provided.
- \*6 Includes amount for HEPCO's own use
- \*7 Of the CO<sub>2</sub> emissions from office activities, the conversion for office electricity is also included in CO2 emissions relating to power generation.

Business operat	ions	OUTP	UT
Electric power generated an	d received	Atmospheric e	emissions
Total: 33,787 million k		CO2*2 12.47 million	n t (basic emissions)
Power generation facility		SOx*3	14,000 t
		NOx <sup>*3</sup>	10,000 t
		Discharges into	
		Discharges into	
		Volume discharged*4	263,200 m <sup>2</sup>
Thermal power generated Nuclear po	wer generated	COD discharge	10.9 t
	kWh	Radioactive	e waste
10, <del>4</del> 07 million kwn		Drum cans	98
		Industrial w	vaste *5
		Amount generated	736,000 t
Popował	ole energies		560,000 t
	droelectric)	⊘Other	175,000 t
3,832 million kWh 111 m	illion kWh	Amount recycled <sup>*6</sup>	
		Final disposal amour	nt 85,000 t
	d from other companies ewable energy, etc.)	Atmospheric emissions fro	om office activities
	million kWh	$CO_2^{*7}$	27.000 t
-575 million kwn - 16,762		002	21,000 (
Power loss, etc.			
	smission/		_
	ion loss rate	Amount of electric power	sold to customers
Transmission /distribution loss	5.5%	Total for retail sales and sale	s to other companies
		31,080 milli	on kWh

# TOPICS

#### **CDP** Compliance

Since FY2021, HEPCO has answered the climate change questionnaire prepared by CDP\*, an international NGO focusing on the environment. We have received a score of B for three consecutive years. The B score refers to the "management level" addressing climate change issues. Companies that score a B have made efforts to minimize climate change risks and recognize climate-related opportunities. \* CDP is an environmental NGO launched in 2000 and headquartered in the United Kingdom. The organization collects, analyzes, and evaluates information about environmental efforts of major companies around the world and releases the results of its assessments to institutional investors.



# Environmental Management Performance and Future Targets (HEPCO Group)

In accordance with the HEPCO Group Environmental Policy, we have set environmental management items that constitute specific initiatives to reduce the burden that we place on the environment in various business sectors.

Each fiscal year, targets are set for these environmental management items and our progress and results assessed, which are then fed back into planned and continuing efforts. In FY2024, we specified target levels for office electricity and water usage as well as the emissions intensity per 1kWh for SOx (sulfur oxide) and NOx (nitrogen oxide), for which qualitative targets had previously been set.

We decided that quantitatively presenting targets helps build stronger awareness among employees and enables us to objectively measure the degree of achievement.

#### **Evaluation Metric**

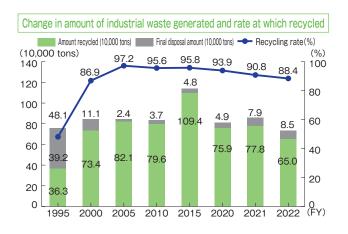


- \*1 Calculated based on the Greenhouse Gas Emissions Accounting, Reporting, and Disclosure System pursuant to the Act on Promotion of Global Warming Countermeasures.
- \*2 Values reflect adjustments and other corrections associated with CO<sub>2</sub> credits, nonfossil fuel value certification purchases, and Feed-in Tariffs (FIT) for renewable energy sources.
- \*3 Industrial waste generated by the HEPCO Group.
- \*4 Figure does not include power station and substation power consumption, transmission/ distribution loss, or other electric power used when supplying electricity.
- \*5 Target items: The procurement rate is indicated for environmentally-friendly copy paper, printed materials (excluding flyers, posters and pamphlets), OA equipment and clothing products which vendors publish in their catalogs or other such publications. Copy paper is only counted for HEPCO Group companies.

				FY2022	FY2023		FY2024 target	
				Achievements	Target	Performance	Score	FT2024 largel
Cont		CO <sub>2</sub> emission factor*1	Unadjusted	0.549	Reduce as much as possible	0.533	( ) ( )	Reduce as much as possible
ibute m neu	Curb CO₂ emissions	[kg-CO <sub>2</sub> /kWh]	Adjusted*2	0.533		0.535		
Contribute to global carbon neutrality		CO <sub>2</sub> emissions f generation division HEPCO Group [10 year]	s throughout	1,441	Reduce as much as possible ▶Reduce CO₂ emissions by 50% or more below FY2014 level by FY2031 (decrease of 10 million tons plus/year)	1,219	Î	Reduce as much as possible ▶Reduce CO₂ emissions by 50% or more below FY2014 level by FY2031 (decrease of 10 million tons plus/year)
warming	Curb non-CO2	SF6 recovery rate	At time of equipment inspection	99	Raise to 97 or higher	99		Raise to 97 or higher
	greenhouse gas emissions	(Calendar year) [%]	At time of equipment removal	99	99 or higher	99		99 or higher
countermeasures	Increase adoption of electric	Initiatives to increa of EVs	ase adoption	Set up an EV consultation service, install EV charging stations on the HEPCO Head Office premises, etc.	Review and implement measures to expand EV use	Provided an EV car sharing service for individual customers (through end of FY2023) and EV charging services for housing complexes, set up EV display at community disaster prevention training and environmental event, etc.	::	Review and implement measures to expand EV use
res and	vehicles (EVs)	Number of comp EVs acquired ( specialized vehicl	excluding	10	Promote as much as possible Introduce 100 or more vehicles by the end of FY2028	27 (total: 37 units)	( )	Introduce 100 or more vehicles by the end of FY2028
Pro environn	Air pollution	SOx emission inten	sity [g/kWh]	0.55	Reduce as much as possible Strive to appropriately operate flue gas desulfurization and denitration systems,	0.65	:	Approx. 0.6
Promotion of local environmental conservation	prevention	NOx emission intens		0.46	among other efforts, to reduce SOx and NOx emissions (emission intensity)	0.45		Approx. 0.5
ocal ervation	Promotion of Weight of treated trace-level PCB-contaminated PCB treatment pole transformers [t] (number of transformers)		389 (2,480)	Ensure treatment by end of FY2027	477 (2,899)	÷	Make sure treatment is completed by the end of FY2027	
Contr sound	Increase industrial waste	Industrial waste recyc	cling rate*3 [%]	90.8	Approx. 95	88.4		Approx. 95
ibute to material	recycling rate	Coal ash recyclin	g rate [%]	89.1	Approx. 95	86.5	(	Approx. 95
Contribute to creation of a sound material-cycle society	Promote plastic resource recycling	Initiatives to rec plastic emissions recycling, etc. (ir activities)	s, increase	-	Promote the reduction of waste plastic emissions, recycling, etc.	Recycled distribution wire plastic (recycling rate: 100%), participated in nationwide activity to clean up the sea and beaches (cleaned up coastlines at 24 sites in Hokkaido), etc.	::	Promote the reduction of waste plastic emissions, recycling, etc.
envi		Office electricity ( [1 million kWh]	usage*4	57.9	Reduce as much as possible	55.0	() ()	57 or below (below a verage for past 3 years)
Promotion o vironmental	Promote office energy-saving	Office water usage	[10,000m <sup>3</sup> ]	20.5	Reduce as much as possible	20.1	$\bigcirc$	21 or below (below average for past 3 years)
on of intal a	and resource- conservation	Green procuren (office supplies, et		94.8	93	95.1	:	93
Promotion of office environmental activities	activities	Amount of copy paper employee [sheets/person] (Amount of copy paper pur wide [million sheets] (A4-si	chased company-	7,413 Reduction of 26.4% (75.8)	20% reduction in amount of copy paper purchased per employee (compared to FY2019) * FY2019 amount 10,069 sheets/person	7,521 Reduction of 25.3% (75.2)		20% reduction in amount of copy paper purchased per employee (compared to FY2019)

# Initiatives for Realizing a Circular Economy

Along with our 3R efforts, which call for reducing waste as well as reusing and recycling materials, we will strive to transition to a circular economy in which resources are effectively utilized while continually striving to curtail their input and consumption.



#### Status of industrial waste recycling (FY2023)

Type of industrial waste		Amount generated (t)	Amount recycled (t)	Recycling rate (%)
Coal ash		560,171	484,558	86.5%
	FGD gypsum	127,401	127,389	99.9%
	Debris (scrapped concrete poles, etc.)	25,887	22,437	86.7%
Other than	Sludge (wastewater treatment sludge, etc.)	10,337	6,876	66.5%
coal	Scrap metal	4,256	3,994	93.8%
ash	Heavy and crude oil ash	2,408	2,084	86.5%
	Waste plastic	1,409	627	44.5%
	Other (waste oil, glass waste, etc.)	3,739	2,432	65.0%
Total		735,608	650,397	88.4%

HEPCO achieved recycling rate

\* Figures in the table include those for HEPCO Group companies.

#### Plastic recycling. etc.

Plastics are used in many places including power generation equipment, transmission and distribution systems, and buildings.

Power distribution lines, the length of which exceeds the Earth's circumference (approx. 40,000 km), utilize much plastic for wire coatings, insulation covering, and other uses. HEPCO Group strives to separate plastics used for power distribution, of which 300 tons are discharged annually, according to product type and material. We have recycled 100% of this plastic.

We will work to improve these efforts throughout the entire HEPCO Group by applying good practices and forming alliances throughout the group.

#### Information Disclosure Pursuant to Plastic Resource Recycling Promotion Act

In accordance with the Act on Promotion, etc. of Recycling Plastic-Related Resources (Plastic Resource Recycling Promotion Act) which took effect in April 2022, we publicly release figures about our emissions performance for industrial waste comprised of plastic products during the previous fiscal year as part of our duty as a waste-generating business. In FY2023, two companies in the HEPCO Group were categorized as large waste-generating businesses (generating 250 tons or more during the preceding fiscal year). In line with the HEPCO Group FY2024 targets, we will contribute to promoting plastic recycling in Japan.

#### Status of emissions, recycling, etc. of plastic product industrial and other waste (FY2023 figures)

Company	Amount emitted (t)	Amount recycled, etc. (t)
Hokkaido Electric Power	51	40
Hokkaido Electric Power Network	317	252
Hokkai Electrical Construction	722	83

\* Only the three companies with considerable emissions are listed.

#### Targets relating to emission reductions, recycling, etc.

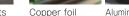
HEPCO Group FY2024 target	Promote the reduction and
environmental management target)	recycling of waste plastic emissions

#### **Recycling of Power Wires**

We gathered power lines, which were set to be scrapped, from throughout Hokkaido at a recycling plant in Tomakomai City. The power lines were meticulously separated into the different materials and recycled into plastic chips and metal nuggets, which are able to be processed as resources again.

The plastic chips and metal nuggets are used as raw material. Plastic is made into floor boards and mats, the metal into power wires again as well as aluminum wheels, copper foil, etc. When materials set to be discarded are recycled, energy is significantly reduced compared to the manufacturing of new material, which leads to reductions in fossil fuel use as well as CO<sub>2</sub> emissions.





Plastic sheets Slip-proof mats Aluminum wheels

# Support for Local Environmental Conservation

To realize a sustainable society, HEPCO Group, as a company with deep roots in Hokkaido with its abundant nature, will strive to implement environmental conservation measures at our power plants, appropriately control and dispose of chemical substances, and take other steps to reduce the burden on the environment in this region.

#### Environmental Conservation Initiatives in HEPCO Group Power Generation Operations

HEPCO Group power plants are built after preliminary investigations have been conducted and estimates prepared of the impact that such construction will have on the environment. We then select equipment and methods for minimizing our environmental footprint. We have also entered into pollution prevention agreements with local governments near our thermal, geothermal and nuclear power stations so that we also strive to prevent pollution by continuously monitoring gas and water discharges while the stations are operating. Moreover, in accordance with environmental laws and regulations, we dispose of hazardous chemical substances and faithfully survey amounts of chemical substances used.

These activities enable us to operate our business in harmony with Hokkaido's nature as well as its living environment.

#### Key environmental protection measures applied during power station construction

	Examples
Terrestrial environment	Restrictions on areas where the topography can be altered or logging carried out     Reduction of on-site work by assembling large machinery at the plant site     Measures for protecting rare insects, raptors and other fauna     Greening activities that take into consideration the surrounding natural vegetation
Water environment	- Selection of construction methods that do not disturb the habitat or homes of living creatures - Preventing adverse impact on water quality by treating water to be discharged (pH, SS <sup>+1</sup> )

#### Key environmental protection measures applied during thermal power station operation

	Items monitored
	Sulfur oxide (Sox) - Nitrogen oxide (NOx) Particulate matter
Water environment	Wastewater quality (pH, COD <sup>+2</sup> , SS, etc.)     Temperature differential between condenser cooling water intake and discharge

\*1 SS: Suspended Solids (amount of particulate matter 2 mm in diameter or smaller that is suspended in or floating on water) \*2 COD: Chemical Oxygen Demand (conversion of the amount of oxidizing agent necessary for decomposing organic matter to the amount of oxygen)

#### **PCB** Neutralization Initiatives

In accordance with relevant laws and regulations, HEPCO Group securely stores and manages PCBs at our business facilities in Hokkaido. We completed the outsourcing of disposal of high-level PCBs to the Japan Environmental Storage & Safety Corporation's Hokkaido PCB Treatment Office within the time period set (end of FY2023). In addition, we properly treat and dispose of low-level PCBs as well.

#### Storage status of PCB and other waste (March 31, 2023)

Waste material	Low-level PCBs
Insulating oil*1	5 kl
Transformers	18 units
Condensers	41 units
Rags and other contaminated objects	2,908 kg
Small- and medium-sized machinery, etc.* <sup>2</sup>	98 units
Fluorescent lamp ballast	-

\*1 Amount stored in drum cans

\*2 Bushings, instrument transformers, circuit breakers, relays, etc.

#### HEPCO Tomakomai Recycling Center

In Tomakomai City, we established a low-level PCB neutralization facility certified by the Minister of the Environment. Since August 2017, we have been treating and disposing of our own PCB-contaminated medium- and large-sized equipment.



#### Addressing Asbestos Issues

Facilities with asbestos sprayed coatings are periodically checked for safety, and

promptly removed or other abatement measures taken as necessary.

In addition, molded objects, which contain non-friable asbestos, are replaced with

non-asbestos products when repairs are made or other maintenance performed.

#### Main uses of asbestos in buildings and facilities (FY2023)

Waste material	Location and usage
Spray containing asbestos	Used as acoustic absorbent material, thermal insulation and fireproof material in buildings 2 buildings
	Used in fireproof boards, flooring and other materials for buildings
Construction material	Contained in construction materials used prior to August 2006. After that date, products containing asbestos have not been used.
Soundproofing material	Soundproofing material for transformers (transforming facilities) 51
Asbestos cement pipe	Pipe material for underground lines (power transmission facilities)
Aspestos cement pipe	Route length: approx. 3.2 km
Thermal insulating	Power generation facilities (thermal power)
material	Volume of remaining asbestos-containing products: approx. 2,600 m <sup>3</sup> (approx. 7% of total)
Cushioning material	Suspension insulators for power transmission and other facilities
CUSTIONING INdiginal	Number of remaining asbestos-containing products: approx. 611,100 (approx. 24% of total)
	Overhead power lines
Thickening material	Length of lines to which corrosion preventive compound has been applied: approx.
	188.0km (approx. 2.3% of total overhead power line length)
	Power generation facilities (thermal & nuclear)
Sealant & joint sheets	Number of remaining asbestos-containing products:
	(Thermal) approx. 26,300 (approx. 28% of total) (Nuclear) approx. 34,300 (approx. 62% of total)
	(NULICAL) ALPHIOX. 34,300 (APPLOX. 02 % 01 (0(A))

#### Appropriate Management of Specified Chemical Substances (Compliance with PRTR Act)

In accordance with the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management. Thereof (PRTR. Act), HEPOO verifies the quantities of specified chemical substances released or transferred, and we properly control and effectively manage these substances as we endeavor to reduce the amount handed. HEPOO notifies the Japanese government when we handle a specified or larger quantity of any of these designated chemical substances.

#### PRTR Act Notifications (FY2023)

Substance	Notifying plant		Environmental emissions		Quantity	Use or source
Substance	Number of plants	Туре	Atmosphere	Water areas	transferred	Use of source
Dioxin	1	Other	0.0016µg-TEQ	0	0	Waste incinerator
Toluene	1	Thermal	2,700kg	0	0	Fuel for generating power
Hydrazine	1	Thermal	0	2.2kg	0	Boiler feedwater treatment agent
Methylnaphthalene	4	Thermal	1.0001/7	0	1.1kg	Fuel for generating power
	1	Nuclear	1,009kg			

\* With the exception of dioxins, totals have been tabulated for substances with an annual volume of 1 ton or more (0.5 t or more for specified Class 1 Designated Chemical Substances) (two significant digits).

# **Biodiversity Preservation Initiatives**

HEPCO Group's business is built upon Hokkaido's abundant natural resources.

So that our operations may continue in Hokkaido, we will implement initiatives to coexist in harmony with nature, such as researching and protecting the ecosystem around electric power facilities.

#### Ecosystem Conservation during Hydroelectric Power Plant Replacement Project

As part of the project, we have been taking into account its impact on rare species and reviewing work methods with the advice of experts and others. We switched the period of time when water releases would be shut down to coincide with intervals when there would be little impact on living creatures and shortened the shutdown to the minimum extent feasible. During construction as well, we worked with people in the community to survey and monitor rare species as we endeavored to preserve the ecosystem.



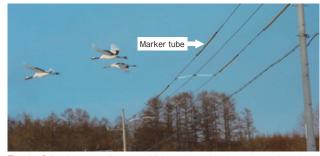
Biological survey underway



Identified cherry trout and freshwater pearl mussels (released after confirmation)

#### Preventing Accidental Electrocution of Birds by Power Transmission & Distribution Facilities

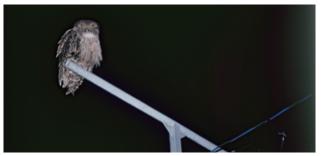
In cooperation with relevant government agencies and experts, we have studied measures and devices that prevent accidents where precious birds are accidentally electrocuted. We have set up transmission and distribution pylons and other structures equipped with marker tubes which helps wildlife recognize power lines and avoid colliding with them, bird checkers so that birds do not approach areas where they might be electrocuted, and perches which guide birds to places safe from electrocution.



Tancho flying by power lines on which marker tubes have been placed



Experiment conducted with experts that focuses on birds of prey Bird checkers mounted on pylons



Blakiston's fish owl resting on a perch

#### **Reforestation Initiatives**

HEPCO Group has actively planted trees with the aim of preserving our environment, totaling more than 2 million trees at 130 locations throughout Hokkaido. In 2021, we entered into the Company Afforestation Agreement with Hokkaido to not only plant more trees, but also strive to realize a sustainable society while giving consideration to restoring water source protections, preserving biodiversity, reducing CO2, developing people who will carry on the forestry industry, and promoting Ainu culture.

From the standpoint of developing and supporting people who will be responsible for the forestry of tomorrow in Hokkaido, we asked students of Hokkaido Prefectural North Forest Development Academy, which opened as the first school in Hokkaido specializing in forestry studies, to select seeds to be planted, and we invited them to propose planting methods suitable for reforestation.

The place where the trees were planted, was named HEPCO & North Forest College Co-Creation Forest. We are actively working to create new forests as the HEPCO Group works together with the Academy.



Signing ceremony with the Governor of Hokkaido (September 2021)



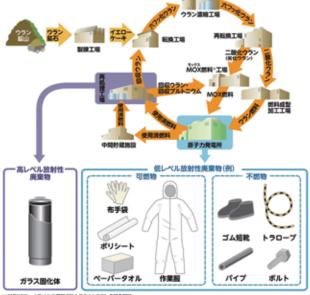
Workers planting trees in the HEPCO & North Forest College Co-Creation Forest

# **Radioactive Waste**

#### What is Radioactive waste?

Radioactive waste is broadly categorized into low-level radioactive waste, which has a low level of radioactivity generated during operation of a nuclear power plant and other processes, and highlevel radioactive waste, which has a high level of radioactivity remaining and is unable to be reused in reprocessing spent fuel.

For disposal, radioactive waste is sorted appropriately according to its radioactivity level, properties, type of radioactive material, and other characteristics. Radioactive waste is strictly controlled, practically processed, and disposed of on the principle that it is the responsibility of the entity generating the radioactive waste to deal with it.

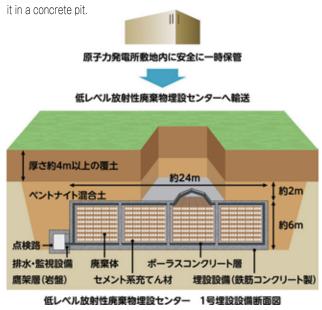


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#### Low-Level Radioactive Waste

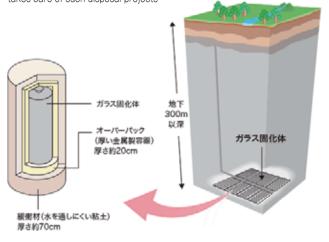
Low-level radioactive waste generated by a nuclear power plant includes gaseous, liquid, and solid waste. At the Tomari Nuclear Power Station, solid waste equivalent to 12,952 drum cans is in storage as of the end of FY2023.

After the waste stored in the drum cans is kept in a storage shed on the premises of the nuclear power station, it is transported to Japan Nuclear Fuel Limited's Low-Level Radioactive Waste Disposal Center in Rokkasho Village, Aomori Prefecture where it is disposed of by burying



#### **High-Level Radioactive Waste**

High-level radioactive waste refers to vitrified waste. This is highlyradioactive waste liquid, which is left over as it is unable to be reused in the reprocessing spent fuel, mixed with molten glass and allowed to harden. After hardening it in a stable form (vitrification), it is cooled and kept in an aboveground facility for between 30 and 50 years, after which it is ultimately disposed of in deep stable bedrock deeper than 300 m underground (geological disposal). The Nuclear Waste Management Organization of Japan (NUMO), which has been authorized by the state, takes care of such disposal projects



### ESG: OUR VALUE CREATION FOUNDATION

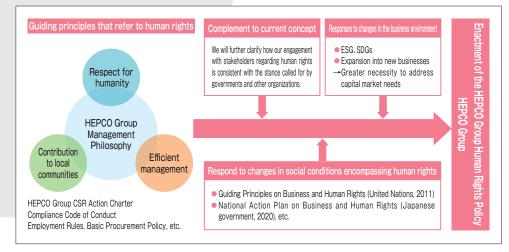
# Social

# Human Rights Initiatives

### **Respect for Human Rights**

HEPCO considers respect for human life and dignity to be part of our management philosophy. As declared in the HEPCO Group CSR Action Charter, we regard respect for the dignity and rights of all people to be at the core of our business activities.

#### Status of the HEPCO Group Human Rights Policy



# Enactment of the HEPCO Group Human Rights Policy

HEPCO Group has operated our businesses as we safeguard the human rights of our customers and other individuals both inside and outside our company. In March 2023, we enacted the HEPCO Group Human Rights Policy ("Human Rights Policy") not only to fulfill our responsibility in respecting human rights in a manner that takes into account international norms, government policies, and other standards, but also to express our respect for the human rights of all individuals associated with HEPCO Group business activities.

This Human Rights Policy applies to all HEPCO Group directors and employees. In addition, we are also calling on our suppliers and business partners to understand and support this policy and appealing to them to respect the policy as well.

In addition, our Human Rights Policy satisfies the conditions required by the Japanese government in its National Action Plan on Business and Human Rights.

HEPCO Group's response to requirements for formulating human rights policies as specified by the Japanese government in the National Action Plan on Business and Human Rights.

Rec	uirements for formulating human rights policies	HEPCO's response		
1	Policy be approved by management including the head of the company	Policy reported to the Board of Directors		
2	Policy be prepared with reference to expertise and knowledge available both inside and outside the company	Policy prepared using the National Action Plan and other norms as a basis		
3	Policy specifies the company's expectation that its employees, business partners, and all others involved with its operations, products, and services will respect human rights	Policy expressly states that the HEPCO Group Human Rights Policy applies to all group directors and employees, and calls on suppliers and business partners to understand and support the policy and appeals to all to respect this policy		
4	Policy is disclosed to the public and awareness of the policy is promoted both inside and outside the company to all employees, business partners, and others associated with the company	Policy published on the HEPCO corporate website (page on Human Rights and Labor Practices)		
5	Human rights policy is reflected in business policies and procedures necessary for establishing the human rights policy throughout the company	<ul> <li>Education and training provided to employees beginning in FY2024</li> <li>Human rights violation risks specified in management risks</li> <li>Compliance with human rights specified in HEPCO Group management policies</li> </ul>		

### **Establishment of Human Rights Committee**

Along with enactment of our Human Rights Policy, we established a new Human Rights Committee in March 2023 to coordinate HEPCO Group's response to human rights issues and promote initiatives related to respect for human rights throughout the entire group.

The Human Rights Committee works to reflect specific details deliberated in HEPCO Group management policies and business management plans, promote and spread understanding of human rights throughout departments, offices and group companies, as well as assist business units and group companies in nurturing a sense of ownership for advancing human rights initiatives.



# Practice of Human Rights Due Diligence

In FY2024, we will strive to identify and assess negative influences on human rights across our supply chain in accordance with the Human Rights Policy, and the Human Rights Committee will proceed to construct a detailed framework for human rights due diligence.

Then, beginning in FY2025, we will practice human rights due diligence, and proceed to disclose information detailing the results of that process.

HEPCO Group's response to requirements for formulating human rights due diligence practices as specified by the Japanese government in the National Action Plan on Business and Human Rights.

Labor union

Corporate attorney

	Human rights due diligence requirements	HEPCO's response
1	Identify and assess negative influences on human rights through, among other efforts, the continued collection of information and an understanding of companies across the supply chain and relevant parties involved with other businesses.	Negative influences on human rights will be ascertained as concerns relevant departments and offices as well as group companies during FY2024
2	In conducting assessments, methods are clearly described such as use of the company's internal data, interviews with employees and suppliers, as well as audits and third-party investigations, and effective assessment procedures are incorporated into the company's internal operational processes	Consideration given to conducting questionnaire surveys of employees and suppliers
3	Continue to follow up on activity plans and their implementation status as well as the effectiveness of measures to determine if the company is effectively addressing impacts to human rights, and revise or change business activities	Consideration given to a framework that will launch in FY2025 for periodically ascertaining (continually surveying) negative influences on human rights
4	Companies are called on to provide both internal and external explanations about the effects of identifying and assessing negative influences on human rights as well as to disclose such information on its corporate website and in integrated reports	Effects of identifying and assessing negative influences will be disclosed to the public via the HEPCO website and integrated reports

Relevant directors, departments & offices

Group companies

# **Promotion of Diversity & Inclusion**

HEPCO and Hokkaido Electric Power Network recognize that diverse perspectives and values within our company are able to serve as strengths facilitating sustainable growth. We will endeavor to ensure the diversity of our human resources without regard to gender, career history, nationality, or other such factors, and promote diversity and inclusion initiatives so that employees with diverse backgrounds accept each other's personalities and differences and are able to make the most of their unique characteristics.

# **Promoting Advancement of Women**

HEPCO Group seeks to promote advancement of women so that we may create a workplace environment where our diverse human resources are able to fully demonstrate their abilities and take on even more active roles regardless of gender.

Pursuant to the Act on Promotion of Female Participation and Career Advancement in the Workplace and the Act on Advancement of Measures to Support Raising Next-Generation Children, we set new numerical targets in April 2023 relating to hiring, management positions, and the percentage of men employees taking childcare leave.

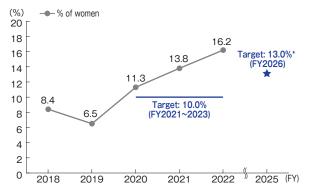
We will continue to provide career education and other guidance for women employees while also maintaining an environment that supports our employees in balancing their work and home life so they are able to demonstrate their capabilities to the fullest in the different stages of their lives.

Key Targets Based on the Act on Promotion of Female Participation and Career Advancement in the Workplace and the Act on Advancement of Measures to Support Raising Next-Generation Children (FY2024-2026)

Item	Target
Hiring	Increase the percentage of women among all hired employees (including mid-career) to $13\%$ or more by the fiscal year when the planning period terminates
Managers	Increase the number of women managers (section chief or higher), which was 14 at the beginning of FY2023, to at least 1.5 times that number or 21 women managers by the end of the fiscal year when the planning period terminates
Percentage of men employees taking childcare leave	Increase the percentage of men employees taking childcare leave to 30% or more by the end of the fiscal year when the planning period terminates

#### Change in percentage of women among new hires

Percentage of women among new hires has trended upward and was 16.2% in FY2023.



\* Due to variation in the number of individuals hired in different fiscal years, the average of the previous General Employer Action Plan (April 2020~March 2023) has been used.

We will continue to strive to provide more information and clear up any uncertainties by communicating information about the HEPCO and Hokkaido Electric Power Network employment environments and various programs via our recruitment websites and other platforms in addition to briefings for women students and round-table discussions with employees.



https://www.hepco.co.jp/corporate/recruit/recruit.html



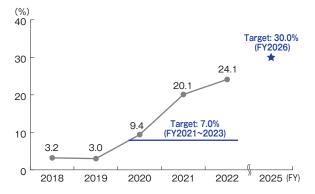
#### Change in Number of Women Managers (Section Chief or Higher)

Because there are few women employees, the number of women managers was 15 at the end of FY2023.



#### Change in the percentage of men employees taking childcare leave

The percentage of men employees taking childcare leave has risen and reached 24.1% in FY2023. (Reference: 100% of women took childcare leave (FY2023))



We will continue to work on development of a system assisting employees with balancing their work and home life to increase the percentage of men employees taking childcare leave.

### **Empowering People with Disabilities**

To provide a welcoming environment for people with disabilities to work and support everyone in maintaining their independence and participating in society through their work, HEPCO Group has strived to expand opportunities for people with disabilities to work across our entire group. Since 2009, we have continually surpassed the statutory quota and, as of June 2023, the percentage of people with disabilities among all employees was 2.53%.

One of our measures providing more employment opportunities has been the establishment of HOKUDEN ASSOCIA in 2007 (certification as a special subsidiary acquired in 2009). The company contracts to provide printing, bookbinding, captioning, and other services for companies both inside and outside the HEPCO Group.

HOKUDEN ASSOCIA has been proactive in welcoming interns and tour groups from special needs schools as well as other educational institutions in addition to offering job coaching to help people with disabilities learn business skills, adjust to their workplaces so as to promote greater advancement for people with disabilities. Since 2011, HOKUDEN ASSOCIA has been certified as a "company providing job assistance to people with disabilities" by the Governor of Hokkaido.



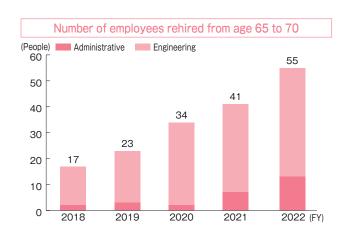


Producing captions for television programs Welcoming a tour group from a special needs school

# Promoting Employment of Older Adults

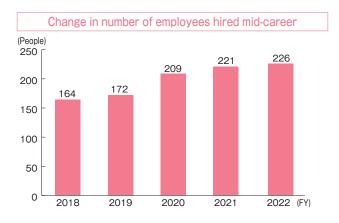
Taking into consideration the purport and particulars of the Act on Stabilization of Employment of Elderly Persons as well as coming changes in the age structure, both HEPCO and Hokkaido Electric Power Network introduced a reemployment system in April 2013, under which all employees who wish to work up to the age of 65 are able to do so, in principle.

In addition, so that our personnel with high-level expertise and knowledge are able to continue to demonstrate their abilities for long time, we have enhanced and improved our personnel system since April 2018 as appropriate, including introducing a program that extends, in special cases, the employment of people with high-level skills up to the age of 70 so that they may pass along their skills and know-how.



# Promoting the Hiring of Experienced Individuals

Both HEPCO and Hokkaido Electric Power Network hire experienced individuals year-round so that people with diverse perspectives and values may demonstrate their abilities and play an active role in our workplaces. In particular, we have taken the initiative to welcome from outside our company individuals with advanced expertise in balancing transactions as well as launching new businesses and developing renewable energies, which will drive our transformation to a general energy services company. Many of these people that have joined us are now playing an active role in our operations.

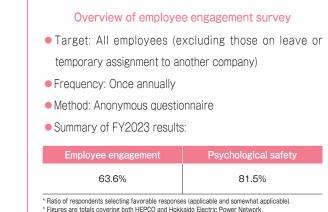


We are improving our internal environment so that individuals hired midcareer are able to play an active role as core human resources, and we are striving to expand activities to which midcareer hires contribute.

# Improving Employee Engagement

To realize our management strategy, we believe it is important to maintain an environment where employees find the work rewarding and motivating, and are able to take the initiative in tackling operations so they may fully demonstrate their abilities. Since FY2023, we have regularly conducted employee engagement surveys. We consider management strategies as well as personnel and labor relations measures as we regularly ascertain and analyze the degree of satisfaction that employees feel about the environment in which they work.

DATA



"Employee engagement" is a term coined to describe the level of emotional attachment, identification, and feeling that employees have for their company. "Psychological safety" is a state where employees feel safe and able to communicate their thoughts and feelings to others in the organization.

# Health and Safety

Investing in our human capital to share with each and every person a fulfilling life and motivation to work

# Promoting Health and Productivity Management<sup>®</sup>

We believe the health and productivity management initiatives that HEPCO actively promotes are investments in people (human capital), and the physical and mental health of all of our employees also fosters sustainable growth.

To that end, we implement health measures designed to enable our employees and their families to share a fulfilling life and the motivation to work. With the aim of extending this to our customer, other companies, and supply chains, we are contributing to the creation of a healthy community.

#### Initiative Framework and Milestones in Achieving Goals

At HEPCO, the Director in charge of the Personnel & Labor Relations Department presides over the Health and Productivity Management Promotion Committee which considers measures that take into account the opinions of employees and the Health Insurance Association. In addition, the Director reports relevant matters to the Executive Committee and other boards, and forms a cooperative process to implement actions. In addition, based on a strategic map outlining a path toward achieving our goals, milestones are set to check progress made on current initiatives. In this way, the effect anticipated to be achieved by implementing measures is ascertained and managed in relation to management challenges that we would like to resolve.



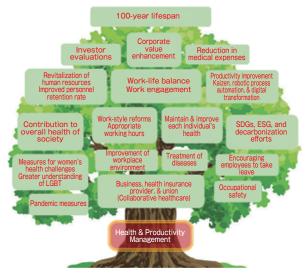
#### HEPCO's Hallmarks

#### Basic health management stance (distinctive to HEPCO)

Each and every one of our employees is a pillar supporting the variety of services HEPCO provides.

The establishment of an environment in which employees are able to continue to work in good health "cheerfully and constructively," "positively," and "with spiritual richness and sincerity" is something that also fosters our sustainable growth.

#### 2.Health & Productivity Management Basics—① >Position & Interconnection of Key Policies & Programs—②



#### Measures Supporting Diverse Work Styles

HEPCO Group maintains a variety of workplaces in our engineering and administrative departments and offices. Moreover, we provide services throughout Hokkaido.

Our health and productivity management initiatives require diverse measures tailored to work styles and work environments, so we have promoted collaborative health programs with the Health Insurance Association in striving to implement these various measures.

#### Key Health Measures

Events	e-Learning for all employees	Small Change Campaign	
	Walk rallies (Group &	Periodontal risk screenings	
	individual competitions)	Online smoking cessation programs	
Health awareness	Public health nurses providing health guidance	Recommending cancer screenings, family health checkups, etc.	
	Health age notifications based on medical checkup results	Body weight challenges	

#### Assessment of Health Management Initiatives

To create a good working environment, it is necessary to verify how effective measures are. Accordingly, we have established health and productivity management indices with numerical targets for work engagement, presenteeism, absenteeism, and other areas as we strive to improve factors that may lower productivity.

Health and Productivity	Metric	Score	Initial target
Management KPIs (FY2023 survey)	Work engagement	(Out of a top score of 4) 2.2492	3.00
(11202000110))	Presenteeism	75.5(%)	80.0
	Absenteeism	2.20(days)	1.50

Work engagement refers to a mental state in which the individual finds vitality, enthusiasm, and engagement to be fulfilling. It is known that highly-engaged employees continue to perform their operations with a positive mental framework. Presenteeism refers to a state where, although the employee is not absent from work, their productivity has declined due to health reasons (score = level of demonstrated performance). Absenteeism refers to circumstances where employees are absent from work due to health reasons (sick leave) and this indicator also represents the loss of performance due to health issues.

#### HEPCO Recognized as Excellent Health & Productivity Management Company 2023 (White 500)

HEPCO was recognized as an Excellent Health & Productivity Management Company 2023 (White 500) for the fourth consecutive year. This recognition is awarded by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi after evaluating various health management initiatives.

Element	Weight	HEPCO	Top responding companies	Industry top	Industry average
Overall score	-	63.3	67.4	66.1	56.3
Management philosophy & policies	3	66.0	69.6	68.5	54.2
Organizational structure	2	62.6	67.9	65.3	57.8
Implementation of programs & measures	2	63.0	69.5	66.9	57.1
Assessment & improvement	3	61.3	68.7	63.6	56.8

(Source: Citing results of "METI 2022 Health and Productivity Management Level Survey Feedback")

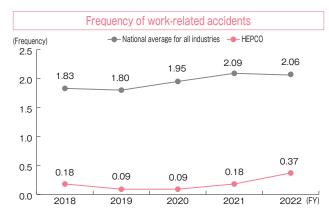


\* "Health and Productivity Management" is a registered trademark of the Nonprofit Organization Kenkokeiei.

### Initiatives for Eliminating Work-Related Accidents

Based upon our strong resolve never to allow anyone associated with our operations to fall victim to an accident, HEPCO Group has strived to promote safety campaigns in which all employees participate with the aim of zero accidents and zero occupational injuries.

In FY2021, there was one work-related accident involving an employee, two incidents in FY2022 and four in FY2023. The frequency of work-related accidents is well below the nationwide average for all industries.



The frequency of work-related accidents represents the frequency of accidents occurring and indicates the number of fatalities or injuries which require a leave of absence of one day or more per 1 million working hours.

#### Safety Activity Promotion System

HEPCO Group established the Central Industrial Safety & Health Committee at our Head Office. The committee drafts the Safety & Health Activity Priority Policy, specifying priorities to be implemented company-wide, and deliberates measures and other actions to prevent recurrences of work-related accidents.

In accordance with the aforementioned policy, workplaces develop their activities independently and continuously improve them using the PDCA cycle.

#### Promoting Safety Together with Partner Companies

In striving to prevent work-related accidents, HEPCO has joined together with our construction work and service business partners to establish the Related Work Safety Cooperation Council, which sets priorities to be addressed and discusses measures to prevent work-related accidents from recurring.

In addition, we also engage in a variety of other activities for raising safety awareness, such as presenting awards to companies and individuals to acknowledge their excellence in managing safety and contributions to preventing accidents.



Joint HEPCO and contractor on-site safety patrol

On this page, the "HEPCO Group" and "we" refer to both Hokkaido Electric Power and Hokkaido Electric Power Network.

# **Co-Creation with Communities**

In addition to meeting demands for new energy from a world-leading semiconductor fabrication plant, its affiliates, data centers, and other enterprises planning to set up operations in Hokkaido, HEPCO Group strives to promptly and effectively capture new business opportunities and expand our domain. We are working to develop the region and provide solutions to social issues through HEPCO Group businesses and services.

# Efforts to Establish a Data Center Running on 100% Renewable Energy in Ishikari City

Hokkaido's Ishikari City, which was selected by the Ministry of the Environment as a Decarbonization Leading Area (first round), drafted its zero-carbon policy "Redesigning the Community Through Decarbonization and Local Activities Producing Renewable Energy Locally." The city aims to bring together industries by supplying renewable energy to data centers and peripheral facilities at Ishikari Bay New Port.

In November 2022, HEPCO Group entered into a basic agreement with other operators\* to create a data center operation running on 100% renewable energy in Ishikari City with the goal of starting operation in FY2027. We will leverage the technology and know-how developed in our electricity business as we work to also supply renewable electric power.

\* Flower Communications, Inc. and Tokyu Land Corporation



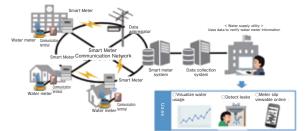
Illustration depicting (planned) data center running on 100% renewable energy

# IoT Communication Service Utilizing Smart Meters

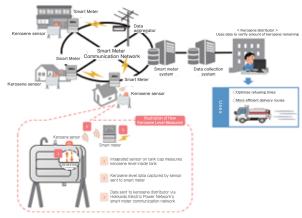
In April 2024, Hokkaido Electric Power Network will launch its IoT Communication Service. Marketed to water utilities and kerosene distributors, this service utilizes a smart meter network ("SMNW") to enhance meter reading efficiency and realize efficient distribution.

An extensive SMNW has been constructed across a broad area of Hokkaido, so this service is available in most areas of the region.

#### Water meter data transmission service



Kerosene level data transmission service



HEPCO Group 70 Integrated Report

# TOPICS

#### Meeting New Energy Demand

In February 2023, Rapidus Corporation selected Chitose City, Hokkaido as the site where it plans to construct a cutting-edge semiconductor plant. The launch of this important national project, which aims to manufacture next-generation semiconductors domestically in Japan, is expected to have an extensive effect, bringing together related industries in adjacent areas, boosting employment as well as collaboration among industry, government and academia.

Rapidus Corporation's move into Hokkaido provided the opportunity for HEPCO Group to set up a new internal organization on May 1 that is dedicated to proposing energy solutions to customers seeking to establish new operations in Hokkaido. This organization will be at the core of our efforts to meet new energy demand and contribute to the regional economy by promptly and appropriately capturing

new business opportunities and expanding operational domains while collaborating with the Hokkaido government, local municipalities, and business groups.





Source: "Construction Plan 1-1" presented during the "Explanatory Meeting on the Next-Generation Semiconductor Project. Construction Plans, etc. In Hokkaido" (Rapidus Corporation and Kaijma Corporation, May 22, 2023)

# **ESG: OUR VALUE CREATION FOUNDATION**

# Governance

# Message from HEPCO Chairman



# We will make the Board of Directors more effective as we aspire to structure HEPCO Group for continued growth

In June 2023, I was appointed to serve as chairman of the HEPCO Board of Directors. Four years earlier, I had been installed as president. During my tenure as chief executive officer, I presided over the spinoff of the transmission and distribution division and produced HEPCO Group Management Vision 2030, in addition to addressing an array of management challenges such as the review of Tomari Nuclear Power Station to assure its compliance with new regulatory requirements so that the power station may be restarted as well as the rise in electric power supply costs as fuel and electricity market prices soared.

Now, as chairman, I intend to do my utmost to enhance HEPCO Group's value over the medium- and long-term by overseeing executive initiatives and rendering decisions that determine key directions orientating management.

HEPCO Group has implemented initiatives that have contributed to enhanced governance, such as transitioning to a Board of Directors that emphasizes oversight functions, enhancing discussions about management risks, and improving opportunities to exchange views and communicate with outside directors.

The June 2023 assessment of the Board of Directors' effectiveness verified that its effectiveness has been on the whole maintained. Nevertheless, we will continue to implement initiatives for constructing an optimal governance framework so that we are able to further improve our strategic thinking as well as promptly and appropriately respond to transformation of the electricity business and the extension of our business domain, all while ensuring a stable supply of electric power amid a business environment which is undergoing tremendous change.

In FY2024, we will discuss the composition and seats on the Board of Directors from

the standpoints of improving the Board's oversight function as well as strengthening our strategic orientation. We will take into consideration changes taking place in the electricity business and expansion of our fields of business as we also deliberate pressing challenges, management risks, and appropriate risk taking. In addition, we will strive to enhance group governance, including sharing awareness about specific challenges and objectives of our group companies and engaging in mutual exchanges of views. When appointing directors, we will continue to ensure opportunities to communicate with executive officers and others so that outside directors may appropriately participate in and offer counsel. My aim is to move these initiatives forward to further enhance corporate governance.

This is a time of significant change. The tough environment in which we do business will remain so. It is incumbent upon the entire HEPCO Group, in these circumstances, to resolutely move forward toward the future.

Our aim is for HEPCO Group to continue to grow as we address a range of challenges, leveraging a flexible mindset and vibrant organization. This will enable us to restart Tomari Power Station soon and meet the intense competition in the retail electricity market head on as well as promote kaizen and digital transformation, in addition to realizing a new business portfolio and assembling facilities with an eye toward carbon neutrality.

To achieve these goals, I, as chairman of the Board of Directors, will make every effort to improve the Board's oversight and engage in substantial discussions about strategy so as to further enhance the effectiveness of the Board of Directors.

October 2023



# Basic Approach to Corporate Governance

Based upon our management philosophy mandating "respect for humanity," "contributions to local communities," and "efficient management," HEPCO Group recognizes that we cannot develop unless the local community enjoys sustained development, and we will make sure that we fulfill our responsibility as a member of society to provide products and services integrating electric power, and endeavor to achieve sustainable growth and enhance corporate value. In order to promote these initiatives for enhancing corporate value, HEPCO will actively strive to implement them in accordance with the following basic policies, which are based on our fundamental belief that it is essential for us to enhance corporate governance that supports transparent, fair, quick, and bold decision-making.

# **Corporate Governance Basic Policies**

#### 1. Appropriate cooperation with shareholders

O Assurance of shareholders' rights

On the basic principle that shareholders are equal according to their share class and equity. HEPCO supports all our shareholders pursuant to laws, regulations, and other principles so that their voting rights at the general meeting of shareholders as well as all other rights that shareholders possess are appropriately assured.

#### $\bigcirc$ Dialogue with shareholders

HEPCO strives to disclose information in a timely, appropriate, and fair manner, and communicates information to allow for an extensive understanding of our business activities. We will construct a relationship of trust through a continuing dialogue with our shareholders and investors.

### 2. Appropriate cooperation with stakeholders other than shareholders

HEPCO has established the HEPCO Group CSR Action Charter mandating that we conduct ourselves with an awareness of HEPCO's social responsibility in all our business activities, and strive to cooperate not only with shareholders, but also employees, customers, business partners, community residents as well as a variety of other stakeholders.

### 3. Assurance of appropriate information disclosure and transparency

In accordance with laws, regulations, and other principles, HEPCO discloses in a timely and appropriate manner to our shareholders and other stakeholders information about our financial affairs and managerial situation as well as management strategies, management issues, risks, governance, and other non-financial information.

#### 4. Responsibilities of the Board of Directors and other HEPCO institutions

Under the auspices of the system for companies establishing an audit and supervisory committee, HEPCO promptly responds to changes in the electricity business environment, recognizes our fiduciary responsibility and accountability to our shareholders, and strives to achieve sustainable growth as well as increase corporate value. In addition, we aim to manage our businesses in a highly transparent manner, and endeavor to strengthen this framework and provide support so that independent outside corporate directors are able to appropriately fulfill their roles and responsibilities.

### **Corporate Governance Framework**

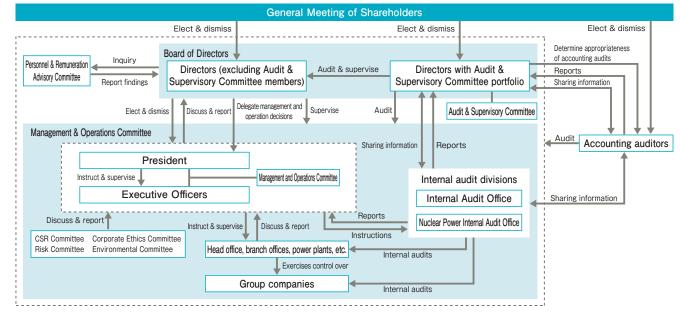
As the business environment in which HEPCO operates undergoes significant changes,

we recognized the need to construct a framework that not only makes it possible for us to respond promptly and agilely to important business challenges, but also further enhance the transparency of the Board of Directors' decision-making and effectiveness of its management oversight, so we adopted the system of a company with an audit and supervisory committee.

### Changes in the Corporate Governance Framework

	2019	2020	2021	2022	2023
Number of directors*	17(2)	17(2)	17(2)	16(2)	15(2)
Number of outside directors*	5(2)	5(2)	5(2)	5(2)	5(2)
Company with Audit & Supervisory Committee	-	-	-	-	Transition ——>
ssessment of Board of Directors' effectiveness	-	Introduced			
Performance-linked compensation system	-	-	-	Introduced	

\* Auditors included through FY2022. Figures in parentheses indicate the number of women.

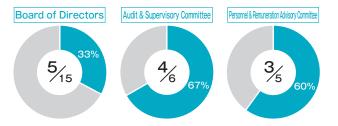


# Board of Directors Maintains a Good Balance & Diversity of Knowledge, Experience and Abilities

The foundation of HEPCO Group's Board of Directors is its composition, encompassing an array of specializations and career experiences, so that management challenges may be appropriately and promptly addressed.

In addition, so that outside views are incorporated into the Board of Directors' discussions and reflected in management, outside directors have been appointed in an effort to enhance corporate value. Outside directors have been selected who have management experience acquired at other companies. The Directors' Skill Matrix illustrates the specialized knowledge and other attributes that the Board of Directors should possess as well as the balance of those attributes among the members.

#### Percentage of outside directors on the Board of Directors, etc. (as of July 2023)



#### Percentage of women directors on the Board of Directors (as of July 2023)



### **Directors' Skill Matrix**

In order for HEPCO to continue to sustainably grow and contribute to realizing a sustainable society, there are areas of expertise that we regard as important and should be provided by our directors. These are corporate management & management strategy, sales, business development, technology & research and development, legal affairs, finance & accounting, and ESG. Our Board of Directors is comprised of members possessing such expertise.

			Knowledge & experience expected of directors										
Name	Position	Position Corporati manage		00		Position		Sales	Business development	Technology and R&D	Legal affairs	Finance & accounting	ESG
Yutaka Fujii	Chairman of the Board		•	•					•				
Susumu Saito	President and Representative Director		•		•	•							
Hideo Seo	Executive Vice President		•				٠		•				
Masahiro Ueno	Executive Vice President		•	•	•								
Noriaki Harada	Executive Officer		•	•		•							
Tsuyoshi Kobayashi	Executive Officer		•	•				•					
Yoshihiro Nabeshima	Executive Officer			•	•				•				
Kazuhiko Katsuumi	Executive Officer				•	•			•				
Shigeki Ichikawa	Director	Outside/ independent					•	•	•				
Koji Akita	Director, Audit & Supervisory Committee			•	•	•							
Hiroshi Oono	Director, Audit & Supervisory Committee		•	•			٠						
Jun Hasegawa	Director and Audit & Supervisory Committee Member	Outside/ independent			•	•			•				
Noriko Narita	Director and Audit & Supervisory Committee Member	Outside/independent Female					٠	•	•				
wao Takeuchi	Director and Audit & Supervisory Committee Member	Outside/ independent	•		•			•					
Mitsuko Ukai	Director and Audit & Supervisory Committee Member	Outside/independent Female			•	•			•				

\* Up to three fields of expertise and experience are listed for each individual. The above is not a complete list of all of the expertise and experience possessed by each individual. \* "Business development" includes IT and digital transformation-related expertise.

\* "Technology & research and development" includes specialized knowledge contributing to the stable supply of electric power as well as expertise relating to carbon neutrality.

#### INTRODUCTION VALUE CREATION STORY VALUE CREATION INITIATIVES ESG: OUR VALUE CREATION FOUNDATION

# Management & Operations

A system of executive officers has been adopted and the Board of Directors delegates to individual directors partial authority for important management operations, thereby strengthening the Board of Directors' oversight functions and expediting operational execution.

In principle, the Board of Directors meets monthly to make decisions on the execution of important operations as prescribed by laws, regulations, HEPCO's Articles of Incorporation, and internal rules in addition to receiving reports on the status of ongoing operations from members of the board, and supervising the performance of each director's duties. There are 15 directors, 5 of whom are outside directors. The Board of Directors is comprised of 13 men and 2 women.

In addition, the Management and Operations Committee, which is comprised of executive officers (President, Executive Vice Presidents, and Executive Officers) and other senior management, meets weekly, in principle, to deliberate important matters pertaining to policies and plans that concern overall HEPCO Group management as well as business execution. In addition, committees have been established to deliberate and coordinate the direction of the entire company on key management issues, such as compliance and risk management.

# Audit & Oversight

In principle, the Audit and Supervisory Committee meets once a month during which it receives reports from accounting auditors and internal audit divisions as well as engages in consultations and passes resolutions about important matters relating to audits as stipulated in laws, regulations, HEPCO's Articles of Incorporation, and internal rules. The six-member Audit & Supervisory Committee is comprised of directors (4 men and 2 women), of which 4 are outside directors. In addition, a full-time staff of seven is assigned to support the work of the Audit & Supervisory Committee members.

In accordance with the audit policy and other guidelines stipulated by the Audit & Supervisory Committee, the Committee members, in addition to attending sessions of the Board of Directors and other important meetings, question directors and others about the status of execution of their duties, peruse important decisions and other documentation, examine operations and assets of business offices, and conduct other inquiries. The Audit & Supervisory Committee examines the arrangement and operation of the internal control system and conducts audits of directors' performance of their duties from the perspectives of legality and appropriateness. The efficiency of audits has been enhanced through close cooperation between the accounting auditors and internal audit divisions.

# Policies and Procedures for Appointing and Discharging Senior Management and Nominating Candidates for Director with Audit & Supervisory Committee Portfolio

DATA

The policies and procedures for determining candidates for Director with Audit & Supervisory Committee portfolio are stated below. The Personnel & Remuneration Advisory Committee has been established, which is comprised of a majority of independent outside directors, and provides appropriate involvement in and advice for determining remuneration.

### (Policies and Procedures)

We consider character, acumen, ability, and other attributes when selecting candidates determined to be the most qualified to serve as HEPCO directors as well as Directors with Audit & Supervisory Committee portfolio so that the Board of Directors will be able to appropriately address a range of management challenges. Based on this policy, representative directors recommend candidates to serve as HEPCO directors as well as Directors with Audit & Supervisory Committee portfolio. A final decision on the candidates is rendered once sufficient deliberation by the Board of Directors is held after the Personnel & Remuneration Advisory Committee, which is comprised of a majority of independent outside directors, has discussed the candidates. The names of candidates that pass this selection process are then submitted to the shareholders meeting for a vote. When the Board of Directors deliberates candidates for Director with Audit & Supervisory Committee portfolio, it also seeks the consent of the Audit & Supervisory Committee.

Amid the tremendous change taking place in the environment that the electricity business operates in, we believe it is necessary for HEPCO to construct an optimal governance framework that enables our strategic orientation to be further enhanced as well as prompt and appropriate responses implemented to address changes in the electricity business, expansion of our business domains, and other transitions while always ensuring a stable supply of electric power.

Taking into account electricity business expertise, the Board of Directors will deliberate its optimal composition, necessary skills, and other attributes from the standpoint of improving oversight function and strengthening its strategic orientation.

The Board of Directors appropriately appoints and discharges senior management after deliberations by the Personnel & Remuneration Advisory Committee, which is comprised of a majority of independent outside directors, have been held that take into consideration evaluations of performance and other aspects.

# **Remuneration Policy**

Remuneration for directors (excluding outside directors and directors with Audit & Supervisory Committee portfolio; hereinafter referred to as "directors") is based on each director's duties, performance, and other factors, and determined according to the following policy for the purpose of linking performance and corporate value as well as heightening awareness of contributions made to sustainable performance improvements and corporate value enhancement, and, with regard to remuneration for outside directors and Audit & Supervisory Committee members, from the perspective of assuring independence in relation to management by putting in place a compensation structure not affected by company performance.

#### 1. Composition

The remuneration provided to HEPCO directors (excluding outside directors) is comprised of a base compensation, bonus (short-term performance-linked compensation), and stock compensation (mediumto long-term performance-linked compensation).

Outside directors and Directors with Audit & Supervisory Committee portfolio receive only a base compensation package from the standpoint of assuring their independence vis-a-vis management, which is achieved by putting in place a compensation structure not vulnerable to corporate performance.

#### 2. Base compensation

Base compensation is a fixed monthly remuneration. The amount is determined by a meeting of the Board of Directors and set within the range of the amount of remuneration determined by resolution of the general meeting of shareholders. The determination takes into account each director's responsibilities and performance, medium- and long-term earnings forecasts, annual operating performance, the fact that the electric business is a public service, in addition to other factors, and the amounts to be paid to each individual are discussed by the Personnel & Remuneration Advisory Committee, which is comprised of a majority of independent outside corporate officers. Then, entrusted by a resolution of the Board of Directors, the Chairman and President take into consideration the Personnel & Remuneration Advisory Committee's deliberations in determining the amount to be paid.

### 3. Performance-linked compensation

#### (1) Bonus (short-term performance-linked compensation)

The total amount to be paid in bonuses (short-term performance-linked compensation) is determined on each such occasion as set by resolution of the general meeting of shareholders, after which the Board of Directors decides the amounts to be paid. In making this decision, specific metrics are not relied upon, but each business year's performance is comprehensively considered. The Personnel & Remuneration Advisory Committee, of which a majority of the members are independent outside officers, deliberates the appropriateness of any payments as well as amounts to be paid to each individual. In addition, if a bonus is to be paid, it is done after a resolution has been passed by the general meeting of shareholders. By a resolution of the Board of Directors, the Chairman and President are entrusted with the responsibility to take into account the Personnel & Remuneration Advisory Committee's deliberations in determining the amounts to be paid.

(2) Stock compensation (medium- to long-term performance-linked compensation)

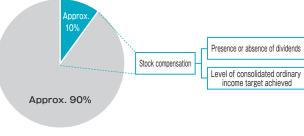
In FY2022, HEPCO introduced a stock compensation system to better clarify how director compensation is linked to company performance and share price, further raise directors' awareness of their contribution to improving performance over the medium- and long-term, and increase corporate value.

As for stock compensation (medium- to long-term performance-linked compensation), the number of shares to be paid is determined within the range of the maximum number of shares set by resolution of the general meeting of shareholders. After the matter has been discussed by the Personnel & Remuneration Advisory Committee of which a majority of the members are independent outside officers, the number of shares to be paid and other matters are determined in accordance with the Corporate Officer Stock Payout Provisions stipulated by resolution of the Board of Directors. The number of shares to be paid is calculated using the total number of points awarded for each business year of the individual's term of service with one share of the company's common stock per point conferred through a stock benefit trust system at the time of retirement. The points awarded to performance. The number of performance-linked points is determined according to the degree to which the target of ¥23 billion/year in consolidated ordinary income is achieved, which is the target profit set out in the HEPCO Group Management Vision 2030. If the target profit is not reached, then no points are awarded for that business year.

 Ratio of base compensation, bonus (short-term performance-linked compensation), and stock compensation (medium- to long-term performance-linked compensation) amounts

The ratio of the base compensation and stock compensation (medium- to long-term performancelinked compensation) paid is 9:1 at the time of target achievement, and, if a bonus (short-term performance-linked compensation) is paid, the percentage that accounts for of total remuneration is determined after comprehensively taking into account duties, performance, and other factors.

Breakdown of Directors' Compensation



Stock compensation (medium- to long-term performance-linked compensation)
Base compensation

#### Total amount of remuneration, etc. for each corporate officer category, total amount of remuneration, etc. by type, and number of eligible corporate officers (FY2023)

#### a. Prior to Transition to Company with Audit and Supervisory Committee

			Total amount of remuneration, etc. by type							
	Total		Monetary co	ompensation		Non-monetary	n (medium- to long-			
Category	remuneration, etc. (Million yen)	Base compensation Bonus (short-term performance- linked compensation)			Stock compensatio term performance-li					
		Number of recipients (Persons)	Amount paid (Million yen)	Number of recipients (Persons)	Amount paid (Million yen)	Number of recipients (Persons)				
Director (Excluding outside directors)	72	9	72	-	-	-	-			
Auditors (Excluding outside auditors)	14	2	14	-	-	-	-			
Outside Directors	4	2	4	_	_	-	_			
Outside Auditors	6	3	6	-	_	-	-			

(Notes) 1. The aforementioned includes one director who retired as of the close of the 98th Ordinary General Meeting of Shareholders held on June 28, 2022.

2. The maximum renuneration amounts set by resolution of the 83rd Ordinary General Meeting of Shareholders held on June 28, 2007 are as follows:

Directors: Not to exceed ¥50 million per month Auditors: Not to exceed ¥11 million per month

Auditors: Not to exceed ¥11 million per month

The number of directors at the close of the ordinary general meeting of shareholders is 12 and the number of auditors is 5.

3. At its April 26, 2007 meeting, the Board of Directors adopted a resolution discontinuing retirement allowances.

#### b. After Transition to Company with Audit and Supervisory Committee

			Total amount of remuneration, etc. by type					
Category	Total		Monetary co	Non-monetary	inked compensation)			
	remuneration, etc. (Million yen)	Base com	pensation	Bonus (short-ter linked com			pensation (medium- to long- mance-linked compensation)	
		Number of recipients (Persons)	Amount paid (Million yen)	Number of recipients (Persons)	Amount paid (Million yen)	Number of recipients (Persons)		
Director (Excluding directors with Audit & Supervisory Committee portfolio and outside directors)	192	8	192	-	-	-	-	
Audit & Supervisory Committee portfolio (Excluding outside directors)	42	2	42	-	-	-	-	
Outside officers	30	5	30	_	_	_	_	

(Note) 1. It was determined that no bonus would be paid for that business year.

2. The maximum remuneration amounts set by resolution of the 98th Ordinary General Meeting of Shareholders held on June 28, 2022 are as follows:

Directors (excluding those with Audit & Supervisory Committee portfolio): Not to exceed ¥34 million per month (Outside directors: Not to exceed ¥4 million per month) Directors with Audit & Supervisory Committee members: Not to exceed ¥10 million per month

The number of directors (excluding those with Audit & Supervisory Committee portfolio) at the close of the ordinary general meeting of shareholders is 9 (of which 1 is an outside director), and the number of directors with Audit & Supervisory Committee portfolio is 6 (of which 4 are outside directors).

## Assessment of Board of Directors' Effectiveness

### **Previous Fiscal Year Initiatives**

Taking into account the results of effectiveness assessments and the transition to a company with an audit and supervisory committee, HEPCO has strived to contribute to reinforcing governance through its transition to a Board of Directors that emphasizes oversight functions, refinement of discussions about management risks, and creation of more substantial opportunities for communicating and exchanging views with outside directors.

### Assessment Conducted of Board of Directors' Effectiveness

In conducting the effectiveness assessment, all directors completed questionnaires that took into account HEPCO's transition to a company with an audit and supervisory committee and included the following categories emphasizing governance. In addition, in May of this year, views were exchanged about the evaluation of the Board of Directors' assessment and the challenges that it faces.

#### [Survey Categories]

Number and composition of the Board of Directors
 Operation of the Board of Directors
 Structure supporting the Board of Directors
 Agenda items addressed by the Board of Directors (from the standpoints of strengthening oversight functions and focusing on strategy)
 Other (overall corporate governance)

### Summary of Assessment Results

From the results of the assessment and views exchanged about the questionnaire items, it was confirmed that, since HEPCO's transition to a company with an audit and supervisory committee, the Board of Directors has engaged in vigorous discussions and that its effectiveness is generally assured owing to participation in resolutions of the Audit & Supervisory Committee and preliminary briefings about agenda items.

In addition, amid the tremendous change taking place in the business environment, we believe it is necessary for HEPCO to construct an optimal governance framework enabling our strategic orientation to be further enhanced and prompt and appropriate responses implemented to address changes in the electricity business, expansion of our business domains, and other transitions, while continuing to ensure a stable supply of electric power.

### FY2024 Initiatives

In FY2024, the Board of Directors will discuss its composition and number of seats from the standpoints of improving the Board's oversight function as well as strengthening its strategic orientation. We will take into consideration changes taking place in the electricity business and expansion of our fields of business as we also deliberate pressing challenges, management risks, and appropriate risk taking. In addition, we will strive to enhance group governance, including sharing awareness about specific challenges and objectives of our group companies and engaging in mutual exchanges of views. When appointing directors, we will continue to ensure opportunities to communicate with executive officers and others so that outside directors may appropriately participate in and offer counsel.

My aim is to move these initiatives forward to further enhance corporate governance.

# **Reasons Outside Directors Elected**

HEPCO strives to enhance transparency of our management process and improve oversight functions by vesting directors with Audit & Supervisory Committee portfolio with voting rights on the Board of Directors, granting them the right to state opinions about the appointment, dismissal, resignation, and remuneration of directors without Audit & Supervisory Committee portfolio during the general meeting of shareholders, and increasing the composition of outside directors on the Audit & Supervisory Committee and Board of Directors. We are working to ensure effective oversight of management by having outside directors offer objective and multi-faceted opinions and advice during Board of Directors' meetings and on other occasions.

Name	Audit & Supervisory Committee Member	Independent Officer	Reasons for Election
Shigeki Ichikawa		0	With his wealth of experience and extensive knowledge gained over a career as an attorney. Shigeki Ichikawa has provided multi-faceted and appropriate comments not just about legal affairs, but also management strategy, finance, accounting, and other areas based upon his extensive insight into law, compliance, risk management, and other fields. As a member of the Personnel & Remuneration Advisory Committee, he has contributed to greater transparency and objectivity of the system for board member personnel and remuneration affairs. In consideration of such experience, knowledge, and achievements, he was elected with the expectation that he will contribute to strengthening the Board of Directors' oversight function from an independent and objective standpoint.
Jun Hasegawa	0	0	Jun Hasegawa possesses a wealth of experience and extensive knowledge gained as a distinguished academic. He has expressed appropriate opinions and comments, which are grounded in his expertise, during sessions of the Board of Directors and Audit & Supervisory Committee. As a member of the Personnel & Remuneration Advisory Committee, he has contributed to greater transparency and objectivity of the system for board member personnel and remuneration affairs. In consideration of such experience, knowledge, and achievements, he was elected with the expectation that he will contribute to strengthening oversight functions of the Board of Directors and Audit & Supervisory Committee transparency and objective standpoint.
Noriko Narita	0	0	Noriko Narita has practiced law as an attorney, a career over which she has gained extensive experience and broad insight. She possesses considerable knowledge about financial and accounting affairs, and has expressed her views and comments about corporate governance during sessions of the Board of Directors and Audit & Supervisory Board. In consideration of such experience, knowledge, and achievements, he was elected with the expectation that he will contribute to strengthening oversight functions of the Board of Directors and Audit & Supervisory Board. In consideration of such experience, knowledge, and achievements, he was elected with the expectation that he will contribute to strengthening oversight functions of the Board of Directors and Audit & Supervisory Committee from an independent and objective standpoint.
lwao Takeuchi	0	0	In the way of the served as vice president and standing statutory auditor at North Pacific Bank, Ltd. In addition to his wealth of managerial experience as well as broad knowledge and insight, he possesses considerable knowledge about financial and accounting affairs. He has expressed his views and comments about corporate governance during sessions of the Board of Directors and Audit & Supervisory Board. In consideration of such experience, knowledge, and achievements, he was elected with the expectation that he will contribute to strengthening oversight functions of the Board of Directors and Audit & Supervisory Committee from an independent and objective standpoint.
Mitsuko Ukai	0	0	Mitsuko Ukai has a wealth of experience and extensive knowledge gained as a distinguished academic. With her expertise, she has offered multi-faceted and appropriate comments during sessions of the Board of Directors and Audit & Supervisory Board. As a member of the Personnel & Remuneration Advisory Committee, he has contributed to greater transparency and objectivity of the system for board member personnel and remuneration affairs. In consideration of such experience, knowledge, and achievements, he was elected with the expectation that he will contribute to strengthening oversight functions of the Board of Directors and Audit & Supervisory Committee from an independent and objective standpoint.

\* The aforementioned five individuals meet the requirements for independent directors pursuant to the provisions of the Tokyo Stock Exchange and Sapporo Stock Exchange.

Correctly understanding and appropriately addressing legal risks to ensure compliance is maintained



# Shigeki Ichikawa, Outside Director

While the role of outside directors is to provide advice and supervision, I am an attorney by profession. On that basis, I recognize how important it is for HEPCO Group in conducting its business to accurately ascertain any legal risks, then appropriately address them, as well as to maintain and ensure compliance. It is from this perspective that I offer any necessary opinions. For example, I have stated my views on issues such as how to approach suppliers' responsibility in cases where a malfunction or defect is found in a component or material delivered quite a long time ago as well as the propriety of continuing to do business with a business partner facing human rights issues.

In June 2022, HEPCO Group set up the Audit & Supervisory Committee. However, both before and after the transition, there was nothing unreasonable about the composition, operation, effectiveness, or other aspects of the Board of Directors. I myself did not perceive there to be any major issues with regard to the company's governance, including solicitation of opinions from the Personnel & Remuneration Advisory Committee, of which outside directors constitute a majority, with regard to the selection of directors or determination of their remuneration. That being said, HEPCO Group does face numerous challenges, among which are the issue of restarting Tomari Nuclear Power Station, intense competition with new power producers, as well as dealing with other market environment changes. Kaizen and issues related to enhancing operational efficiency also pose other issues, in addition to the difficult environment in which we operate. Within this context, outside directors are provided with briefings before each Board of Directors' meeting, and, if necessary, opportunities are created to consult and meet with relevant departments and offices. The questions and discussions that arise from such encounters are reflected in briefings given to the Board of Directors and incorporated into plans and initiatives prepared by relevant offices and departments.

HEPCO Group runs its power generation business in Hokkaido, a vast and cold area with high transmission and distribution costs, yet a low population density and insufficient industrial agglomeration. Even so, directors and employees display high morale. We are also anticipating an increase in demand for electric power as more and more data centers are set up, along with semiconductor and other next-generation industries moving into the region to set up operations. This region also offers a treasure trove of wind power as well as many other resources favorable to HEPCO Group's future. As an outside director, I hope to contribute to our company's development, however modest that contribution may be. Looking to the future to understand challenges that await us and considering how our solutions should be orientated

Jun Hasegawa, Outside Director and Audit & Supervisory Committee Member

After nine years as an outside auditor, I have been serving in my current position as an outside director and member of the Audit & Supervisory Committee since June 2022 when HEPCO transition to such a system. I place a particular emphasis on addressing various challenges that the company has faced from both engineering and human development perspectives yet with an eye towards the future, and have continued to engage in forthright discussions and dialogue with management.

The event which left the deepest impression on me was HEPCO's first blackout. It was important that we investigate what caused this, and review measures so that such service interruptions never happen again. Currently, I am focused on looking into the causes of the Tomato-Atsuma Power Station Unit 4 turbine malfunction, which occurred shortly after the periodic inspection was completed.

When HEPCO Group transitioned to a company with an Audit & Supervisory Committee, I offered my opinions about how the board should be structured, the committee's corresponding relationship with the Board of Directors, disclosure of the Personnel & Remuneration Advisory Committee's deliberations, as well as descriptions of skill classifications, and these views were reflected in the results of our discussions. In addition, I pointed out that people outside our company do not have a sufficient understanding of our ESG initiatives, and that we need to devise ways to get that information out through our public relations.

As one of Hokkaido's core companies, we continue to contribute to its stable energy supply. Yet, we must face up to many challenges, including successfully achieving our carbon neutrality targets. As we strive to do that, we face a harsh business environment that has become intensely competitive following liberalization of the electric power business. That is why it is essential for management to look 10 or more years into the future as we grapple with various issues that we face today. I believe our company is functioning well as we strive to solve issues faced by our entire group in accordance with HEPCO Group operating rules.

As an outside director, I believe it is also important that we ascertain problems and consider how to orient solutions as we look ahead decades into the future. I also attached tremendous importance to mutual communication with our stakeholders. I look forward sincerely to serving in my current role and doing the best that I can. Views and support offered from outside the company and based upon divergent knowledge and experience are hoped for as HEPCO addresses reforms and changes

Noriko Narita, Outside Director and Audit & Supervisory Committee Member



It has been one year since I was appointed to serve on the Audit & Supervisory Committee. Although I had done auditing work before that, there have been many issues about which I have had to learn more.

The Audit & Supervisory Committee was established just one year ago. I always try to participate in the discussions, on an equal footing to the extent possible, with regard to system design and other issues.

Companies must deliberate how to maintain and upgrade their social responsibility, which supports corporate value, while they are also taking into consideration the interests of a diverse group of stakeholders, which includes business partners and ordinary consumers. With regard to strengthening the Board of Directors' oversight functions, I believe that we should pursue appropriate initiatives for our company while sufficiently exchanging views about the issues and proceeding in step-by-step manner.

HEPCO Group's corporate philosophy is to be a responsible energy supplier supporting the regional economy and customers' livelihoods. I believe that maintaining an environment in which our employees, the ones who prop up that business foundation, are able to develop and work is precisely the key to maintaining sustainability.

It is imperative that we aim for growth over the medium- and long-term, advance reforms to improve job satisfaction, and have our cognitively-diverse personnel with different ways of perceiving and contemplating things create new ideas for operating our businesses. Company-wide initiatives will need to also be strengthened to train women for senior management positions.

It is expected that outside support and views based on divergent knowledge and experience will be incorporated into our reforms and transformation.

Although my contribution may be meager, I, as an outside director, intend to put forth my opinions while also taking into account the aforementioned perspectives.

Work that only outside directors can perform contributes to enhancing corporate value

Iwao Takeuchi, Outside Director and Audit & Supervisory Committee Member



For two years now (one as an outside auditor). I have participated in HEPCO Group's management as a member of the Audit & Supervisory Committee. I also currently serve as standing statutory auditor at a local community financial institution where I have also served as a director. I have quite extensive experience gained through long service at financial institutions, reviewing small- and medium-sized companies, supporting management improvements, as well as managing branch offices. Based upon this experience, I asked myself when I agreed to take this position as an outside board member at HEPCO how I would be able to supervise and monitor this company and, moreover, should I take on this responsibility. The answer that I arrived at was to serve on the Board of Directors and other organs while always being aware of how managers in other industries, creditors, and consumers view the HEPCO Group.

Each director oversees a specific area, so, they logically tend to prioritize that field. Does the strategy for their division really coincide with the company-wide strategy? Proposals have also been raised about numerous topics relating to pioneering new businesses with the objective of enhancing profitability, but are those new businesses really areas that will leverage HEPCO Group's strengths? I have also given negative comments about businesses not expected to have any synergy with our current operations as well as those where market expansion is limited. There have also been cases involving HEPCO Group companies' responses to compliance issues where I felt the analysis conducted had not fully delved into the genuine causes (a similar tendency has been seen in sporadic scandals) and demanded the problem be examined more thoroughly. In other words, I have basically made it a point to question and comment on all issues about which I have felt something is not quite right.

The HEPCO Group Board of Directors essentially operates in a way that encourages outside directors to actively pose questions and offer their opinions. Before each session, meticulous preliminary briefings are provided, which also include an overview of deliberations in internal committees and other discussions. This has created a posture that allows for those of us from outside the company to more easily supervise and rein in corporate initiatives. Some of the challenges that we face in terms of governance include enhancing diversity (appointing women directors from inside the company as well as those with practical management experience from outside the company) in addition to encouraging more observations and remarks from inside directors from a company-wide point of view.

The role played by outside directors has shifted completely now from providing advice to monitoring. Although it is not the rule, there are "jobs" that only outside directors can perform. Our greatest mission is to contribute to enhancing corporate value, even if just a little. I believe these efforts will result in meeting the expectations of capital markets.

## Leveraging HEPCO Group's strengths

Mitsuko Ukai, Outside Director and Audit & Supervisory Committee Member



HEPCO Group has three strengths. The first is our corporate brand value, which confers a sense of security and reliability and has been developed as we have carried out our responsibility for providing a stable supply of electric power to the region. The second is our stance of continually and boldly confronting challenges. It is the high trust that customers place in HEPCO for their electricity and energy needs, which makes it possible for us to enhance services as well as offer both new lifestyles and efficient business styles as our business segments expand. The third strength is our many employees strongly committed to the proposition that HEPCO Group, which maintains a public interest mission in providing a stable supply of electric power, should be a responsible energy supplier.

In addition, although some have the impression the electric power industry is male-dominated, women are also energetically working at not only at the Head Office, but also our branch offices and power stations. This is a result of our earnest efforts to empower women.

On the other hand, because we regard a stable supply as our primary mission, that devotion also raises concerns, which encompass some inflexible aspects. I hope that, in the liberalized competitive market, HEPCO Group will aim to sustainably grow our businesses and strive to operate these businesses while also maintaining a broad perspective.

Since FY2019. I have served as a director. In FY2023 when the company established the Audit & Supervisory Committee. I was appointed to serve on the committee and have also taken part in deliberations regarding top management personnel as a member of the Personnel & Remuneration Advisory Committee. I also fully realize that my role has also expanded as the Board of Directors' oversight functions have been further reinforced through management decisions intended to respond flexibly, as circumstances require, to changes in society.

The management challenge that we face in FY2024 is how top management will conduct our business and operations to move us towards restarting Tomari Nuclear Power Station. Nuclear power not only contributes to energy security, but is also highly valuable as an economically-efficient baseload power source. Russia's invasion of Ukraine and the push to achieve carbon neutrality have prompted a reassessment of nuclear power. Ever since the Fukushima accident. Japan has worked to restart its reactors under very stringent regulations. Safe facilities have started to operate. Restarting a reactor requires not only authorization from the government, but it is also a management decision arrived at while communicating with shareholders, investors, and a range of stakeholders.

I intend to offer advice based on knowledge gained through research and education, which I have undertaken at university, on social acceptance of the use of nuclear power and radiation.

#### Outside Directors Tour Ishikariwan-Shinko Power Station and Ishikari Bay Offshore Wind Farm Construction Site

With the aim of enhancing governance, outside directors visit business sites subject to effectiveness assessments by the Board of Directors. As part of this effort, tours were arranged of Ishikariwan-Shinko Power Station and Ishikari Bay Offshore Wind Farm construction site in August 2023.

The visit toured the ship used for constructing wind turbines, substation housing storage batteries, and other facilities at the site where the Ishikari Bay Offshore Wind Farm is being constructed. The construction project is being carried out by Green Power Investment Corporation, with which HEPCO entered into a partnership agreement, in order to move toward the ultimate aim of achieving carbon neutrality in Hokkaido by 2050.

At Ishikariwan-Shinko Power Station, after a report detailing operational status of the LNG-fired power generation facility, outside directors attended a demonstration showing how work is performed using autonomous patrol robots along with the on-site support provided utilizing head-mounted displays\*, which are part of HEPCO's digital transformation initiative. The facility tour provided an in-depth understanding of facility functions and operation visible with projection mapping, a technology that projects objects in the shape of the turbine and other power generation equipment onto a display surface.

\* Head-mounted display: Display device worn on the head. The device makes it possible for a worker on-site to perform certain work independently with data projected remotely onto a display





ng a video showing Ishikariwan-Shinko Power Station's facilities and functions Demonstration of head-mounted display





Ishikari Bay Offshore Wind Farm viewed from the roof of Ishikariwan-Shinko Power Statio Projection mapping of the power generation facility (Photos taken during tour of the Ishikari Bay New Port Offshore Wind Farm Project in August 2023)

Roundtable Discussion between outside Directors and Younger Employees A roundtable discussion was held, which brought together younger employees at Ishikariwan-Shinko Power Station and HEPCO Group's outside directors

as part of our efforts contributing to greater Board of Directors' effectiveness. During the discussion, the moderator sought to elicit the frank opinions of nervous younger employees working on the front lines. The participants engaged in a lively exchange of views on a broad range of topics, including employee motivation and concerns about working in the field. Grounded in their respective fields of expertise and experience, each of the outside directors offered different pieces of advice to the younger employees as well as words of encouragement in the hope that they will each do their best as part of the team responsible for the future of the electricity business. After the roundtable concluded, some outside directors stated they would like to convey the comments offered by these young employees in addition to what the outside directors saw in the field to the Board of Directors.

# Board of Directors (As of June 28, 2023)



Chairman of the Board Yutaka Fujii (Date of Birth: April 19, 1956) April 1981 Joined HEPCO

- June 2015 Director & Executive Officer, HEPCO June 2016 Executive Vice President & Director, HEPCO April 2018 Executive Vice President & Director, HEPCO and President, Power Network Company June 2019 President & Director, HEPCO June 2022 Representative Director and President, HEPCO
- June 2023 Chairman of the Board, HEPCO (present position)



Representative director Chief Executive Officer Susumu Saito (Date of Birth: January 23, 1961)

Director, Nuclear Power Promotion Division April 1983 Joined HEPCO June 2015 Director, Tomato-Atsuma Nuclear Power Station, HEPCO July 2017 Operating Officer and Director, Tomato-Atsuma Nuclear Power Station, HEPCO June 2019 Operating Officer and General Manager, Thermal Power Department, HEPCO

- July 2019 Executive Officer and General Manager, Thermal Power Department, HEPCO
- June 2021 Director & Executive Officer, HEPCO June 2023 Representative Director and Chief Executive Officer, HEPCO (present position)



Representative director Executive Vice President Hideo Seo (Date of Birth: April 14, 1958)

Acting Director, Nuclear Power Promotion Division Responsible for Internal Audit Office, Environmental Affairs Office, Personnel & Labor Relations Department, and General Affairs Department April 1982 Joined HEPCO June 2007 General Manager, Business Development Department, HEPCO February 2009 Temporarily Assigned to the Hokkaido Economic Federation January 2015 Manager, Asahikawa Branch Office, HEPCO June 2016 Audit & Supervisory Committee Member, HEPCO June 2017 Director & Executive Officer, HEPCO June 2022 Representative Director and Executive Vice President, HEPCO (present position)



Representative director Executive Vice President Masahiro Ueno (Date of Birth: December 13, 1960)

Acting Director, Nuclear Power Promotion Division Responsible for Corporate Planning Department and Research & Development Department April 1983 Joined HEPCO July 2011 Director, Hakodate General Power Network Center, HEPCO June 2014 General Manager, Engineering Department, HEPCO June 2016 Operating Officer and Corporate Planning Department, HEPCO April 2018 Senior Operating Officer and General Manager, Corporate Planning Department, HEPCO June 2019 Director & Executive Officer, HEPCO June 2023 Representative Director and Executive Vice President, HEPCO (present position)



Member of the Board Executive Officer Noriaki Harada (Date of Birth: September 19, 1961)

Deputy Director, Nuclear Power Promotion Division and Assistant Director, Nuclear Power Administration Division Responsible for Hydropower Department, Civil Engineering Department, Moiva Power Station Replacement Construction Office, and Xamikawa Power Station Replacement Construction Office April 1985 Joined HEPCO

- June 2014 General Manager, Distribution Department, HEPCO June 2017 Operating Officer and General Manager, Personnel
- & Labor Relations Department. HEPCO
- June 2020 Director & Executive Officer, HEPCO (present position)



Member of the Board Executive Officer Tsuyoshi Kobayashi (Date of Birth: September 19, 1961)

Responsible for Secretary Office, Accounting & Finance Department, and Purchasing & Contracting Department April 1984 Joined HEPCO June 2015 General Manager, Corporate Planning Department, HEPCO

- June 2017 General Manager, Accounting & Finance Department, HEPCO
- July 2017 Operating Officer and General Manager, Accounting & Finance Department, HEPCO

June 2020 Director & Executive Officer, HEPCO (present position)



Member of the Board Executive Officer Yoshihiro Nabeshima (Date of Birth: April 12, 1958)

 Deputy Director, Nuclear Rever Promotion Division

 Responsible for Sales Promotion Department, Totyo Sales Department and Public Relations Department, TepPC0

 April 1983
 Joined HEPCO

 September 2015
 General Manager, Corporate Planning Department, HEPC0

 July 2016
 Operating Officer and Manager, Business Strategy Office. Corporate Planning Department, HEPC0

 April 2018
 Operating Officer and General Manager, Generating Christian General Manager, Generating Energy Business Department, HEPC0

 June 2021
 Executive Officer, HEPCO

 June 2023
 Diredor & Executive Officer, HEPC0



Member of the Board Executive Officer Kazuhiko Katsuumi (Date of Birth: January 11, 1963)

 
 Deputy Director, Nuclear Power Promotion Division and Director, Nuclear Power Administration Division April 1987
 Joined HEPCO

 August 2015
 General Manager, Nuclear Power Department, HEP00
 July 2017
 Operating Officer and General Manager, Nuclear Power Department, HEPCO

 June 2021
 Operating Officer, and Director, Tomari Nuclear Power Officer, HEPCO
 July 2021
 Executive Officer, HEPCO

 July 2021
 Executive Officer, Executive Officer, HEPCO
 July 2023
 Director Team Nuclear Power Officer, HEPCO



Outside Director

#### Shigeki Ichikawa (Date of Birth: July 1, 1947)

April 1974 Licensed Attorney and Member, Sapporo Bar Association (present position) June 2012 Audit & Supervisory Committee Member, HEPCO June 2016 Director, HEPCO (present position)

# Director, Audit & Supervisory Committee Member (As of June 28, 2023)



Member of the Board Audit & Supervisory Committee Member Koji Akita (Date of Birth: June 4, 1958)

April 1981 Joined HEPCO March 2006 Manager, Power Trading Management Office, Corporate Planning Department, HEPCO April 2009 Director, Central Load Dispatching Center, Engineering Department, HEPCO September 2013 General Manager, Engineering Department, HEPCO June 2015 General Manager, Research & Development Department, HEPCO June 2017 Audit & Supervisory Committee Member, HEPCO June 2018 Senior Audit & Supervisory Committee Member, HEPCO June 2022 Director and Audit & Supervisory Committee Member, HEPCO (present position)



Member of the Board Audit & Supervisory Committee Member Hiroshi Oono (Date of Birth: April 5, 1960)

April 1984 April 2009	Joined HEPCO General Manager, Sales Department, Kushiro Branch Office, HEPCO
December 2011	Manager, Business Ethics Office, General Affairs Department, HEPCO
June 2016	Manager, Kitami Branch Office, HEPCO
April 2018	Operating Officer and Manager, Sapporo Branch Office,
April 2020	Power Network Company (resigned March 2020) Operating Officer and Manager, Sapporo Branch Office, Hokkaido Electric Power Network Co., Inc. (resigned June 2020)
June 2020 June 2021 June 2022	Audit & Supervisory Committee Member, HEPCO Senior Audit & Supervisory Committee Member, HEPCO Director and Audit & Supervisory Committee Member, HEPC0 (present position)



**Outside Director** Audit & Supervisory Committee Member Noriko Narita (Date of Birth: April 11, 1951)

April 1979	Licensed Attorney and Member, Sapporo Bar
	Association (present position)
December 2014	Chair, Hokkaido Labor Relations Commission
	(resigned November 2016)
June 2016	Audit & Supervisory Committee Member, HEPCO
June 2022	Director and Audit & Supervisory Committee
	Member, HEPCO (present position)



**Outside Director** Audit & Supervisory Committee Member Iwao Takeuchi (Date of Birth: April 5, 1958)

April 1981 Joined North Pacific Mutual Bank, Ltd. June 2012 Executive Officer and Manager, Kushiro Chuo Branch, North Pacific Bank, Ltd. November 2013 Executive Officer and Special Advisor, First Loan Department, North Pacific Bank, Ltd.

June 2014 Managing Executive Officer, North Pacific Bank, Ltd. June 2016 Managing Director, North Pacific Bank, Ltd. June 2019 Deputy President & Director, North Pacific Bank, Ltd. June 2021 Audit & Supervisory Committee Member, HEPCO June 2022 Standing Auditor, North Pacific Bank, Ltd. (present position) June 2022 Director and Audit & Supervisory Committee Member. HEPCO (present position)



**Outside Director** Audit & Supervisory Committee Member Jun Hasegawa (Date of Birth: December 13, 1943)

April 1971 Lecturer, School of Engineering, Hokkaido University April 1985 Professor, School of Engineering, Hokkaido University April 1971 Professor, Graduate School of Engineering, Hokkaido University (resigned March 2004) April 2004 Principal, National Institute of Technology, Hakodate College (resigned March 2009) April 2009 President, Hokkaido Information University April 2013 Advisor, Hokkaido Information University (resigned March 2014) June 2013 Audit & Supervisory Committee Member, HEPCO June 2022 Director and Audit & Supervisory Committee Member, HEPCO (present position)



**Outside Director** Audit & Supervisory Committee Member Mitsuko Ukai (Date of Birth: April 20, 1952)

- April 1983 Graduate Assistant, Graduate School of Humanities and
- Sciences, Ochanomizu University (resigned March 1985) April 1985 Assistant Professor, Gumma Women's Junior College (resigned March 1991)
- April 1991 Assistant Professor, Musashigaoka College (resigned March 2001)
- April 2001 Professor, Graduate School of Education.
- Hokkaido University of Education April 2018 Emeritus Professor, Graduate School of Education,
- Hokkaido University of Education (present position) June 2018 Director, HEPCO
- June 2022 Director and Audit & Supervisory Committee Member, HEPCO (present position)

# | HEPCO Group CSR Action Charter

### **Basic Approach**

Grounded upon our management philosophy mandating "respect for humanity," "contribution to local communities," and "efficient management," HEPCO Group recognizes that we cannot develop unless the community enjoys sustained development. We make sure that we fulfill our responsibility as a member of society and contribute to social and economic development as well as foster culture through the provision of products and services integrating electric power. With a management structure unifying the HEPCO Group, we conduct our business activities in a transparent and fair manner so as to secure the trust of society and enhance corporate value.

In pursuing our business activities, we give top priority to safety, respect for human rights, and consideration of the environment.

Our position is firmly established upon a basic recognition of these principles and we will always act in accordance with the standards of conduct shown below.

## Standards of Conduct

#### Our top priority is customer satisfaction in the provision of products and services integrating electric power.

• We will improve communication with our customers to ensure safety and stability, and provide products and services of a quality and price satisfactory to our customers.

#### We will sincerely live up to the trust and expectations that the community places in us.

- We will proactively provide information relating to our business activities, and, as a member of the community and greater society, we will improve communication with the community in an effort to enhance mutual understanding.
- · We will deploy the comprehensive strengths of our group as we work to energize the local economy, community and greater society.

#### We will be sure to live up to the expectations of our shareholders and investors.

- We will be unrelenting in promoting increased managerial efficiency, appropriately managing risks in our business activities, and striving to stably and sustainably enhance value.
- We will appropriately and timely disclose information about our business activities, and actively communicate with our shareholders and investors.

#### We will create a work environment that is safe and motivating for our employees.

- We will always aim to be thoroughly aware of health and safety as we strive to improve the workplace environment and culture, endeavor to create an open and transparent work culture, ensure safety, and maintain health.
- We will respect each and every individual's personality and individuality, and create a pleasant and fulfilling workplace where each employee is able to sufficiently demonstrate his or her abilities.

### **CSR** Committee

#### We will engage in transparent and fair transactions with our business partners as equal partners upon a basis of mutual trust.

- · We will value good faith and act sincerely in accordance with our agreements and sound business practices.
- · We will also ask our business partners to share our awareness of corporate social responsibility and make the effort necessary to ensure that such obligations are fulfilled.

#### We will conduct our business activities while also proactively working to find solutions to global and local environmental issues.

- So that our society may sustainably develop, we will promote global warming prevention measures, local environmental conservation, and formation of a
  recycling-oriented society, and we will work to reduce our environmental footprint in every facet of our business.
- · We will practice thorough environmental management, and provide appropriate and timely announcements about our initiatives to address environmental issues.

#### We will practice compliance thoroughly in all aspects of our business.

- We will always be aware and act in a manner which recognizes that practicing compliance (upholding laws, regulations, internal rules, and company ethics) is our responsibility.
- · We will properly manage personal information as well as all forms of information that our company is entrusted with.
- We will stand firmly against and stringently respond to any antisocial acts that threaten the order and safety of society.

The CSR Committee, which is chaired by HEPCO President, was established at the Head Office with the aim of smoothly and effectively promoting corporate social responsibility initiatives throughout the HEPCO Group. The CSR Committee deliberates revisions to the HEPCO Group CSR Action Charter, policies and measures concerning important CSR initiatives, and other matters.

# **Business and Other Risks**

The principal risks that may affect the HEPCO Group's performance are described below.

Forward-looking statements provided here are current as of the date on which the financial statement was filed (June 29, 2023).

The HEPCO Group recognizes these risks and strives to prevent and address them in the event they do arise.

Status of Nuclear Power Generation	HEPC0 regards ensuring the safety of Tomari Nuclear Power Station as our most important management task, and, spearheaded by the president's responsibility for top management, we are striving to further enhance safety based upon our "Safety Improvement Plan." Specifically, we are complying with the new regulatory requirements enacted for nuclear power plants, and have been endeavoring to diversify our safety measures as well as strengthen and enhance our severe accident response system through, among other efforts, conducting nuclear emergency preparedness training which anticipates a severe accident or other such disaster, as well as implementing construction work for safety measures aimed at further enhancing safety and reliability. In addition, we are striving to comply with the review to verify compliance with the new regulatory requirements toward the goal of restarting Tomari Nuclear Power Station, and have proceeded to address an assessment of a combination of a tsunami caused by an earthquake and one caused by a landslide on shore, formulation of reference tsunami, assessment of the possibility of volcanic activity, assessment of the thickness of fallen pyroclastic material (volcanic ash), design policy for a seawall, assessment of the impact in a case where the seawall is damaged due to tsunami, as well as other assessments. Nevertheless, there is the possibility that our business performance may be affected if the shutdown of Tomari Nuclear Power Station is further prolonged, which depends upon on the status of future reviews and other factors as well as the possibility that fuel costs may continue to rise.
Equipment Failure & Supply Hindrance	Although HEPCO Group endeavors to maintain the reliability of our power generation and distribution systems through steady implementation of inspections and maintenance, stable fuel procurement, and maintenance of equipment and material supply chains, there is the possibility that performance may be affected where costs are incurred for restoring such systems or burning more fuel than anticipated at other power plants due to the shutdown of the power plant if its facilities or equipment experience interference due to a natural disaster, malfunction, or other such event, or if facility operation and maintenance become more difficult due to interruptions in fuel supply or equipment and material supply chains.
Institutional Changes Encompassing the Electricity Industry	The development, revision, and other changes to markets and rules aimed at further promoting competition in the electricity business as well as other such changes to national systems and frameworks may affect the HEPCO Group's performance. Nuclear back-end operations associated with nuclear power generation are ultra-long-term and entail uncertainty. A system has been set up that contributes financing calculated in accordance with laws and regulations for costs required to reprocess spent fuel as well as dispose of radioactive waste. As for expenses required for dismantling nuclear power generation facilities, measures have been put in place pursuant to laws and regulations for a system to calculate the total estimated cost over the anticipated operable period. Although these systems and measures mitigate risks to the operator, performance may be affected if such systems are revised. In addition, although the HEPCO Group strives to reduce its CO2 emissions intensity as a member of The Electric Power Council for a Low Carbon Society, which is comprised of electric power companies nationwide, and is aiming to cut CO2 emissions from the power generation division by more than 50% from FY2014 levels (or a reduction of more than 10 million tons) by FY2031, the introduction of environmental regulations relating to global warming prevention may affect the HEPCO Group's performance.

Fluctuations in Fuel & Wholesale Electricity Market Prices	As for fuel procurement costs, the current situation in Ukraine and foreign exchange rates have had a significant effect, causing fuel prices to fluctuate widely. Expenditures for electricity purchases are affected by fluctuations in wholesale electricity market prices. Accordingly, the HEPCO Group aims to achieve a balanced power source mix, and endeavors to spread out and avoid the risk of price fluctuations through a combination of long-term contracts and spot purchases, diversification of suppliers and other contractual methods, leveraging derivative trading, and adoption of other measures. In addition, from the standpoint of economic rationality, we have reduced costs through optimal combinations of power generated in-house and the procurement of electricity through power market transactions. The impact on performance due to fluctuations in fuel and wholesale power market prices is mitigated through application of the fuel-cost adjustment system, which reflects fluctuations in fuel prices within a certain range, to low-voltage customers, and the fuel-cost adjustment and other systems, which also reflects fluctuations in wholesale power market prices, to high- and extra-high voltage customers.
Fluctuations in Electricity Demand and Sales	The HEPCO Group's performance may be affected if there is a decrease in electricity demand as a result of an economic or production decline due to an economic downturn, advances in energy savings, decrease in population, temperature effects, and other factors, or if there is a decrease in electricity sales on account of intensified competition with other operators.
Fluctuations in Amount of Rainfall or Snowfall	The amount of annual rainfall or snowfall may affect the HEPCO Group's performance as an abundance of water would be a factor reducing fuel costs and a shortage of water would be a factor increasing fuel costs. Because the system of setting aside a reserve for fluctuation in water levels has resulted in certain adjustments being made, the effect on performance is diminished.
Interest Rate Fluctuations	There is the possibility that market interest rates may change, increasing costs for new financing and affecting performance. At the end of FY2023, all of HEPCO Group's interest-bearing debt was procured at fixed interest rates, so there is no risk that interest payment may change due to rate fluctuations.
Businesses other than Electricity	HEPCO Group strives to conduct preliminary evaluations and appropriately manage operation of businesses other than our electricity business. However, deteriorations in the business environment and other factors may make engaging in such businesses more difficult than initially anticipated.
Spread of Infectious Diseases	To ensure a stable supply of electric power, HEPCO Group has implemented measures to prevent the spread of infectious diseases. However, if such a spread hinders business operations, performance may be affected.
Strict Adherence to Compliance	Although the HEPCO Group CSR Action Charter and Compliance Code of Conduct have been established and HEPCO Group ensures that we are fully compliant with laws and regulations, public trust may be lost and performance affected if actions occur that violate laws or contravene company ethics.
Information Management	The HEPCO Group has maintained information security, established internal rules, and conducted employee training to strictly control operational information about our customers and others that is held by the HEPCO Group. However, problems resulting from information leaks may demean HEPCO Group's social credibility and affect its performance.

The potential degree, timing and amount are not provided for aforementioned risks that are difficult to reasonably foresee.

# Strict Adherence to Compliance

HEPCO and Hokkaido Electric Power Network established the "Compliance Code of Conduct," which mandates that their corporate officers and employees be fully aware of how they should conduct themselves so as to always be in compliance.

# **Compliance Promotion Framework**

Under the auspices of the Corporate Ethics Committee chaired by HEPCO's President, the HEPCO General Affairs Department's Compliance Office and Hokkaido Electric Power Network's General Affairs Department serve as secretariats for efforts to provide compliance training and workshops as well as support compliance initiatives within the company and at group companies. The Corporate Ethics Committee was established to properly respond to and prevent the recurrence of compliance violations, and effectively facilitate compliance-related initiatives throughout the HEPCO Group. The Corporate Ethics Committee holds regular meetings each quarter.

#### **Compliance Promotion Framework**





\* 108 as of March 31, 2023

### **Compliance Promotion Initiatives**

Because compliance is inseparable from business operations, executives who are supervising departments and offices have been installed as compliance managers, and the secretariats work together with these compliance managers. In each workplace, these compliance managers are central to efforts to promote greater awareness of compliance and establish proper observance in the way that personnel conduct themselves.

Specific initiatives include e-Learning courses offered to all employees annually. In FY2023, 99% of employees took such courses. In addition to on-the job training in the workplace (provided quarterly), which uses teaching materials with compilations of case studies detailing compliance violations and other such incidents, compliance workshops have been held with sessions tailored to each workplace and administrative hierarchy, for which the secretariats have provided instructors (attended by a total of 4,509 personnel, including sessions conducted at group companies).

### **Compliance hotline**

Compliance hotlines have each set up to handle consultations about compliance violations or other infractions by employees in the workplace as well as on or off of the job. This system is able to gather a broad range of information about compliance violations.

#### Number of compliance hotline inquiries (including anonymous inquiries)

FY2021:	FY2022:	FY2023:
34	20	43

### Initiatives relating to personal information protection

HEPCO and Hokkaido Power Network have constructed frameworks headed by their respective executive officers overseeing compliance. Internal rules have been developed based upon the Personal Information Protection Act and other relevant laws and regulations. Contractors' efforts are periodically supervised. E-Learning and workshops are also regularly offered to employees.

In addition, both companies have established and released personal information protection policies. They have set up personal information consultation services, to which comments and questions from people outside the company are directed regarding how personal information is handled.

### Initiatives Aimed at Compliance with Conduct Restrictions

In April 2020, pursuant to the revised Electricity Business Act, HEPCO spun off Hokkaido Electric Power Network to handle all power transmission and distribution operations. General electricity transmission and distribution utilities, including Hokkaido Electric Power Network, are required to maintain neutrality and fairness in dealings with any power producer or retailer.

Accordingly, the Electricity Business Act prohibits general electricity transmission and distribution utilities from discriminating between group companies and other power producers and retail operators as well as from acting in a manner that hinders competition.

#### **HEPCO's Initiatives**

To ensure the general electricity transmission and distribution utility that Hokkaido Electric Power Network operates is neutral and network operations for wheeling services are fair, HEPCO internal rules prescribe that no demands may be made of Hokkaido Electric Power Network to use or provide information for purposes other than for which it was originally authorized, nor to engage in discriminatory treatment.

In addition, following improprieties related to the Renewable Energy Business Management System detailed elsewhere in this report, HEPCO internal rules were revised to add stipulations relating to procedures when requesting information, self-checks on the status of compliance with conduct restrictions, and monitoring by competent management offices. In addition, we are also seeking to raise awareness among employees by incorporating content relating to improprieties in compliance training and e-Learning that is provided annually for all employees.

#### Hokkaido Electric Power Network's Initiatives

To ensure the neutrality and fairness of the general electricity transmission and distribution utility. Hokkaido Electric Power Network has prescribed prohibitions in its internal regulations on certain acts, including unauthorized use of information and discriminatory treatment. In addition to checking on the status of all workplaces' compliance with company rules, we are working to raise awareness and provide all employees with training about these particular prohibited acts.

In addition, in response to leaks of customer data that have occurred at other general electricity transmission and distribution utilities as well as the improprieties pertaining to the Renewable Energy Business Management System detailed elsewhere in this report, we incorporated workshops on conduct restrictions into our training for all departments with the goal of changing employees' mindset, and we have worked to strengthen our compliance system, including a wholesale revision of checks to verify compliance with rules.

These initiatives will be evaluated and improved through assessments conducted and advice provided by outside experts in the newly-established Committee on Conduct Restrictions & Compliance in order to maintain and enhance our compliance framework.

## TOPICS

### Response to Unauthorized Browsing of the Renewable Energy Business Management System

#### Summary of Incident

In December 2018 prior to splitting off power transmission and distribution operations, employees of HEPCO's retail division obtained from employees in the power transmission and distribution division IDs and passwords for the Renewable Energy Business Management System, which is administered by the Ministry of Economy, Trade and Industry. Thereafter, these employees used the system to address errors in grant application procedures related to renewable energy feed-in tariffs as well as issue interchange contract confirmations verifying contract amendment filings. They also viewed information about power generation facilities. Some of the employees who accessed the system were aware that access authority was only granted to general electricity transmission and distribution utilities, yet they wrongfully viewed information, having prioritized operational efficiency over compliance. HEPCO and Hokkaido Electric Power Network were both subjected to administrative guidance issued by the Ministry of Economy, Trade and Industry regarding wrongful browsing of the system. In addition, in June 2023, the Personal Information Protection Commission issued administrative guidance to both companies regarding the handling of personal and other information available through the system.

HEPCO did not engage in any sort of cartel activity seeking to restrict competition to acquire customers, nor did the company browse any data relating to new electric power customers through the system with respect to wheeling services.

#### **Recurrence Prevention Initiatives**

Both HEPCO and Hokkaido Electric Power Network deeply regret these incidents, and have instituted the following measures to prevent any such recurrence.

#### HEPCO's Recurrence Prevention Measures

Thorough compliance in daily operations: Compliance will be given top priority as we engage in operations.
 Employee training: This incident has been added to the materials used in compliance training for all employees and shared throughout the company.
 Controls on system IDs and passwords: The handling of IDs and passwords will be thoroughly controlled with passwords changed periodically.
 Internal audits: Internal audits will be periodically conducted to verify that

recurrence prevention measures continue to be practiced and are effective.

#### Hokkaido Electric Power Network's Recurrence Prevention Measures

- Employee training: Continuity will be ensured when operations are handed over to new personnel at the time of reassignment as concerns the handling of information assets and company-wide training periodically provided to raise employees understanding of the handling of information as well as laws and regulations, including restrictions on certain types of conduct.
- ② ID & password controls: Purposes will be specifically defined for use of the system and limits placed on users. We will make sure IDs and passwords are periodically changed, and regularly monitor operational status.

# Information Security

### Basic information security policy

HEPCO and Hokkaido Electric Power Network (hereinafter, collectively referred to as "HEPCO") promote secure information security initiatives so that electric power is stably supplied. To counter the increasing threat in recent years of a cyber- attack, we have promoted information security management that is predicated upon the PDCA cycle, while, at the same time, working to maintain and further raise the level of information security.

### Information security management system

HEPCO's system for managing information security has been arranged so that the Executive Officer in charge of Information and Communications serves as the Information Security Supervisory Manager and the Information Systems & Telecommunications Department as the Information Security Supervisory Office. In each of HEPCO's Head Office departments and offices as well as our business offices, an information security manager has been appointed to head information security management, and there are also information security workplace managers who promote initiatives in each workplace.

	President & Director (CEO)
	Information Security Supervisory Manager (Executive Officer in charge of Information and Communications)
	Head of Information Security Supervisory Office (General Manager of Information Systems & Telecommunications Department)
Departments	Information Security Manager (General Managers of department or office)
and Offices	Information Security Workplace Manager (Managers)

### Cyberattack Countermeasures

As a key infrastructure company engaged in the electricity business, HEPCO recognizes that a cyberattack poses a major threat, and we have implemented the following initiatives in accordance with relevant laws, regulations, company rules and other standards.

(1) Management and operational measures (organizational and personal security control measures) Information security rules and other internal regulations have been developed. Thorough guidance is provided about information management, including measures (implemented annually) to train and have employees and information security workplace managers be fully aware of information security. There are also prohibitions on the use of external storage media in principle, and management of registers detailing the status of recording media controls.

So that we may detect cyberattacks early and respond rapidly, we have had our Security Operation Center (SOC) conduct security surveillance (24 hours × 365 days/year) and the Computer Security Incident Response Team (CSIRT) collect and distribute security- related information as well as provide incident response. In addition, a regular part of our training operations includes exercises where we assume a cyberattack has been launched so that we may identify issues to be resolved and improve the level of our response.

(2) Physical and technical security control measures to prevent human system breaches HEPCO has adopted appropriate safeguards to prevent system intrusions, attacks on systems, destruction or alteration of important data, as well as information leaks and breaches.

#### (3) Readiness against external threats seeking to exploit vulnerabilities

Along with prohibiting the use of USB drives in principle, HEPCO has put in place preparations to counter external threats seeking to exploit vulnerabilities. These controls include filters to restrict viewing of external websites, monitoring cloud services, checking for viruses in email attachments sent from outside the company, as well as other measures to keep data safe against external attacks.

## Group-wide information security initiatives

DATA

HEPCO has put in place an information security management system for the entire HEPCO Group. We formulate plans and promote information security measures to serve as the standard throughout the entire group.

In addition, we established the HEPCO Group Information Security Policy so that information security is maintained and augmented throughout the entire group and our group companies uniformly and reliably implement information security measures. Group companies adopt a variety of security control measures based upon this policy.

In addition, HEPCO has supported group companies in developing action plans to reinforce information security within their companies. Initiatives developed as part of the PDCA cycle are implemented in conjunction with efforts to raise the level of information security throughout the entire HEPCO Group.

## TOPICS

### Education and Training Provided for Employees to Improve Information Security Response Capabilities

HEPCO Group offers e-Learning courses on the basics of information security for both HEPCO and HEPCO Group company employees. In addition, since FY2021, HEPCO Group has strengthened our ability to respond to cyberattacks attempted using suspicious emails with training provided several times over the course of the year to HEPCO and HEPCO Group company corporate officers and employees on how to respond to targeted email attacks as well as follow-up training for employees and others who open a suspicious email during the training.

# Disclosure of information and constructive dialogue with shareholders and investors

HEPCO strives to disclose information in a timely, appropriate, and fair manner, and communicates information to allow for an extensive understanding of our business activities. We will build a relationship of trust with our shareholders and investors through a continuing dialogue.

## Assurance of appropriate information disclosure and transparency

In accordance with laws, regulations, and other principles, HEPCO discloses in a timely and appropriate manner to our shareholders and other stakeholders information about our financial affairs and managerial situation as well as management strategies, management issues, risks, governance, and other non-financial information.

To enhance our information disclosure and provide greater convenience to our stakeholders, HEPCO publishes on the "Data Download" webpage financial and non-financial metrics, actual figures, and other information,

which may be downloaded in an Excel format. https://www.hepco.co.jp/english/ir/datadownloads.html



年度	2017	2010	2019	2020	2021
收益计编辑					
10A 記点産営業F営業の分	1.0	22	22	27	12
死上高吉葉利益半00	4.6	6.6	67	73	34
売上高当期純新編率のの	23	80	36	49	10
ROE 自己資本利益率(%G)	6.5	10.7	11.0	14.1	26
安全性脂肪消					
8三波本比率3-0	10.5	11.1	12.0	13.8	19.7
インタルスト・カメリッジーレンオ(語)	7.4	9.1	91	10.0	10.6
有利于食働時間(十個円)	14268	1400.7	1416.9	1.357.3	1,385.3
始率性脂標					
NORRENEWCED	0.19	8.99	0.59	0.97	0.31
体式循环指挥					
8PS 1株当たい純成金額(円)	11244	\$18.82	011.01	1,117,26	1,005.61
FER. 評価時间在並来(注)	6.9	0.0	05	05	- 04
EPG 1林当先北海南站利量37D	71.84	101.92	120.16	108.09	26.57
FER 持備切開率(10)	9.7	62	39	38	182

# Constructive Dialogue with Our Shareholders and Investors

So that we may hold a constructive dialogue with shareholders and investors, HEPCO set up a division exclusively for investor relations and designated a director to oversee these interactions. We are also endeavoring to promote a better understanding of our business activities and enhance communication through various means that promote dialogue, such as holding company information sessions. Through our corporate website, we disclose the materials provided at company presentations as well as important questions asked and the replies given during such briefings. https://www.hepco.co.ip/english/ir/presentations.html



Moreover, since FY2022, we have been conducting company information sessions both in-person and online so that as many people as possible are able to participate. Information of interest, comments, and other suggestions gained through these dialogues are timely and appropriately reported to HEPCO directors.



In-person information session that is also being streamed online

#### Record of Dialogues Conducted in FY2023

Type of Dialogue	Date held	Conducted by	Attendees (counterparts)
Company	May and November	President	Institutional investors, analysts, etc.
information	(After year-end and 2nd		May: 35 at the venue and 30 online
session	quarter financial releases)		November: 25 at the venue and 40 online
Meetings with shareholders & investors	After each quarter financial release	Executive Officer, Corporate Planning Department IR Group Leader	Institutional investors, analysts, etc. from Japan and other countries FY2023 Achievements: 30 companies/Total of 90 meetings
Meetings about		Manager of the Business Ethics Office,	Institutional investors (responsible
General Meeting		General Affairs Department, and Leader	for exercising voting rights) and firms
of Shareholders'		of the Stock Group in the Business Ethics	advising the exercise of voting rights
agenda items		Office, General Affairs Department, HEPCO	FY2023 Achievements: 8 companies

## Dialoguing with shareholders at the general meeting of shareholders

In advance of general shareholder meetings, we have endeavored to enhance the content of information provided and disclose it early. We have also made available in advance videos explaining our business reports among other efforts to provide easy-to-understand explanations for shareholders as soon as possible.

Also, we have adopted discussion formats that make it easy for shareholders to communicate their views (format in which questions and comments about reports and agenda items are compiled and then discussed). We aspire to respectfully provide explanations and respond to questions posed by our many shareholders and thereby enhance dialogue.



General meeting of shareholders in session

# SASB INDEX SASB-Based Information Disclosure

The status of HEPCO Group initiatives are stated as relates to the United States Sustainability Accounting Standards Board (SASB) industry-specific standards (electric utilities & power generators industry). The SASB standards were prepared envisioning mainly companies and markets in the United States, so they also include items that do not correspond to business activities in Japan. HEPCO has endeavored to disclose as much information as possible in accordance with the SASB standards.

Topic	Accounting Metric	Code	Performance
			Environment
	<ul><li>(1) Scope 1 emissions</li><li>(2) Ratio of Scope 1 emissions subject to emission regulations</li><li>(3) Ratio of Scope 1 emissions subject to mandatory emission reporting</li></ul>	IF-EU · 110a.1	(1) 12,000,000t-CO₂ (2) 99% (3) 100%
	Greenhouse gas (GHG) emissions associated with power supplied to customers	IF-EU·110a.2	12,400,000t-CO <sub>2</sub>
Greenhouse Gas Emissions & Power Supply Plan	OShort- and long-term Scope 1 emissions reduction plan OEmissions reduction targets OAnalysis of target performance	IF-EU·110a.3	<ul> <li>The HEPC0 Group is striving to achieve targets for reducing greenhouse gas emissions set in the HEPC0 Group Management Vision 2030, redouble those efforts, and further promote initiatives to achieve carbon neutrality for all energy use in Hokkaido by 2050.</li> <li>OEmissions reduction targets</li> <li>◇FY2031 target</li> <li>HEPC0 Group's aim is to reduce CO₂ emissions from the power generation division by more than half compared to FY2014 levels (equivalent to over 10 million tons annually).</li> <li>◇FY2051 target</li> <li>In addition to eliminating CO₂ emissions from the power generation division, our aim is to expand electrification, use hydrogen among other efforts to achieve carbon neutrality in Hokkaido for all types of energy, including forms of energy other than electricity.</li> <li>○Reduction plan</li> <li>◇By 2030</li> <li>Increase installed renewable energy capacity by over 300.000 kW (including areas outside Hokkaido)</li> <li>Restart nuclear power station on the fundamental premise that safety is assured</li> <li>Utilize low CO₂-emitting LNG-fired thermal power plants</li> <li>Suspend or decommission aging oil - and coal-fired power plants</li> <li>Promote adoption of heat pumps and other high- efficiency electric devices and electric vehicles</li> <li>Offer energy-saving diagnoses</li> <li>Increase adoption of ZEB</li> <li>Offer PPA services</li> <li>◇By 2050 (additional measures for future initiatives)</li> <li>Develop CO₂-firee thermal power plants that utilize hydrogen, ammonia, CCUS, and other innovative technologies</li> <li>Supply hydrogen and ammonia produced from renewable energy sources in Hokkaido to meet electric power which is difficult to electrify</li> <li>OAnalysis of achievements</li> <li>In addition to utilizing the low CO₂-emitting and highly-efficient LNG-fired Ishikariwan-Shinko Power Station, HEPCO is suspending or decommission aging coal-fired thermal power generation division in FY2023: 12.19 million tons)</li> </ul>

Topic	Accounting Metric	Code	Performance
Air Quality	Air emissions of the following pollutants: (1) NOx (excluding N2O) (2) SOx (3) Particulate matter (PM10) (4) Lead (Pb) (5) Mercury (Hg); percentage of each in or near areas of dense population	IF-EU · 120a.1	(2) 10.000t, 99% (2) 8,900t, 99% (3) Undisclosed (4) Undisclosed (5) Undisclosed
	<ul><li>(1) Total water withdrawn</li><li>(2) Total water consumed;</li><li>percentage of each in regions with high or extremely high baseline water stress</li></ul>	IF-EU·140a.1	(1) 28,400,000,000㎡, 0% (2) 2,530,000㎡, 0%
	Number of non-compliance incidents associated with water intake and water quantity	IF-EU · 140a.2	0 incidents
Water Resource Management	Water resource management risks and risk mitigation strategies	IF-EU · 140a.3	<ul> <li>The following initiatives have been carried out in an effort to ascertain water-related risks and mitigate such risks.</li> <li>To ascertain the impact of water-related risks, the World Resources Institute's Aqueduct tools have been used to analyze water stress in areas where HEPCO Group facilities are located. The results have shown water stress classified as "low-medium," indicating that water-related risks do not have a significant impact on operations.</li> <li>OThermal power generation facilities</li> <li>•Water used for cleaning equipment and other wastewater generated during power plant operation is passed through a comprehensive wastewater treatment system or other such facility to separate oils, remove solids, neutralize effluent, and perform other functions so that the water may then be released as clean water.</li> <li>•The difference between water intake and drainage temperatures as well as other parameters are monitored to investigate the effect that water releases have on the sea environment.</li> <li>•In accordance with the Water Pollution Prevention Act's effluent standards, pollution control agreements entered into with local governments, and other mandates. HEPCO sets management values and strives to prevent water pollution.</li> <li>OHydroelectric power production facilities</li> <li>•The HEPCO Group complies with water intake quantities for which permits have been received in accordance with laws and regulations.</li> <li>•At hydroelectric power plants that correspond to certain conditions*, water is released for river environment maintenance.</li> <li>* Hydroelectric power plants corresponding to certain conditions: Sectors where the water level may fall due to water intake for hydroelectric power generation are required to be 10 km or longer in length with a catchment area of 200 km<sup>2</sup> or larger.</li> </ul>
	Amount of coal ash generated and percentage recycled	IF-EU · 150a.1	·560,000t, 87%
Coal Ash Management	Number of coal ash impoundments	IF-EU·150a.2	·2 locations ·The structure of coal ash repositories is a landfill, and the HEPCO Group strives to ensure safety by complying with the ministerial ordinance-mandated "Technical Standards for Final Disposal Sites for Ordinary Waste and Final Disposal Sites for Industrial Waste."

Topic	Accounting Metric	Code	Performance		
			Social Capital		
	Average retail electric rate (per 1 kWh) for (1) residential, (2) commercial, and (3) industrial customers	IF-EU·240a.1	<ul> <li>(1) 32.02 [JPY]</li> <li>(2) and (3) total: 28.02 [JPY] (Total electric power)</li> <li>Including amount equivalent to consumption taxes and other charges</li> <li>Calculation excludes the renewable energy surcharge.</li> </ul>		
	Typical monthly electric bill for residential customers for (1) 500 kWh and (2) 1,000 kWh	IF-EU·240a.2	<ul><li>(1) 18,214 [JPY]</li><li>(2) 38,566 [JPY]</li><li>Calculation excludes the renewable energy surcharge.</li></ul>		
Energy Affordability	Due to non-payment of electric bill, (1) Number of residential customer electric disconnections and (2) percentage reconnected within 30 days	IF-EU·240a.3	<ul> <li>(1) 23,240</li> <li>Number of disconnections due to nonpayment of electric bill</li> <li>Excludes number of supply interruptions based upon the General Provisions for Specified Retail Service</li> <li>(2) None</li> <li>Cases where an electric bill has not been paid after the due date are stipulated to be a revocation of the supply contract in accordance with the Electricity Standard Terms and Conditions (contract cancellation).</li> <li>Because supply stops and restarts are not specified in the Electricity Standard Terms and Conditions, this item is listed as "None."</li> </ul>		
	External factors relating to ease with which consumers may access electric power (including economic conditions in the electric power supply service area)	IF-EU·240a.4	The Electricity Business Act specifies: "A general electricity transmission and distribution utility must not refuse to provide wheeling service in its service area without justifiable grounds." In principle, electric power is supplied to all customers who wish such service within the Hokkaido Electric Power Network service area, so there is no difference in the ease with which consumers are able to access electric power. Other external factors that may affect electricity rates are the policy-based renewable energy surcharge, fuel cost adjustment, and rate discounts based on Japan's Electricity and Gas Price Dramatic Change Mitigation Measures Project.		
		H	Human Capital		
Occupational Health & Safety	<ol> <li>Rate of occupational accidents (TRIR: number of incidents per 200,000 man-hours)</li> <li>Rate of fatal occupational accidents (number)</li> <li>Rate of potential incidents (NMFR: no. of incidents per 200,000 man-hours)</li> </ol>	IF-EU∙320a.1	<ul> <li>(1) 0.31 [%] (HEPCO employees)</li> <li>(2) 0 [incidents] (HEPCO employees)</li> <li>(3) Undisclosed (Total potential incidents are not tabulated for the entire company, so this item is given as undisclosed.)</li> </ul>		
		Busine	ess Model Innovation		
	Percentage of electric utility revenues from rate structures that (1) are decoupled and (2) contain a lost revenue adjustment mechanism (LRAM)	IF-EU·420a.1	There are no items corresponding to decoupling or lost revenue adjustment mechanisms.		
End-Use Energy	Percentage of electricity supplied (MWh) delivered over smart grids	IF-EU·420a.2	Percentage of meters converted to smart meters as of the end of March 2023: 92.4%		
Efficiency & Demand	Electric power reduced through energy-saving initiatives	IF-EU·420a.3	The following quantitative data is disclosed in lieu of the amount of electric power reduced. OFY2023 energy-saving, electrification and ZEB proposals: approx. 2,800 (companies) * HEPCO proposes a variety of solutions to our customers to meet their electrification and energy-saving needs. (See https://www.hepco.co.jp/business/total_solution/index.html)		

Topic	Accounting Metric	Code	Performance				
	Leadership & Governance						
	Total number of nuclear power units (Based on classification using U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column)	IF-EU·540a.1	3 units (Tomari Nuclear Power Station's 3 units) * Currently, all units at Tomari Nuclear Power Station are shutdown, and the HEPCO Group is currently undergoing a review by the Nuclear Regulation Authority to verify compliance with new regulatory requirements.				
Nuclear Safety & Crisis Management	Nuclear safety management and emergency management	IF-EU·540a.2	Each and every HEPCO employee recognizes that he or she is responsible for safety and continually works to foster and maintain a safety culture. HEPCO's efforts to improve safety include formulation and annual reassessments of a safety improvement plan based on our value that safety is the highest priority. One example may be seen in HEPCO Group's establishment and reinforcement of the Corrective Action Program (CAP), an initiative for broadly collecting information as well as detecting and resolving issues voluntarily in order to prevent nonconformances from happening and recurring. In addition, HEPCO Group participates in activities sponsored by organizations inside and outside Japan relating to nuclear power so that we may proactively incorporate knowledge about nuclear safety. We also apply the Japan Nuclear Safety Institute's guidelines on excellence and engage in activities with the aim of achieving excellence.				
	Number of regulatory non-compliance incidents relating to cybersecurity and physical risks	IF-EU · 550a.1	Undisclosed (Out of consideration of the risks that disclosure may lead to a cyber attack, the number of instances is given as "undisclosed.				
Grid Resiliency	<ol> <li>Average annual service interruption time (System Average Interruption Duration Index (SAIDI))</li> <li>Average annual number of service interruptions (System Average Interruption Frequency Index (SAIFI))</li> <li>Average time until restoration after one service interruption (Customer Average Interruption Duration Index (CAIDI))</li> <li>Inclusive of event-caused interruptions over a certain magnitude</li> </ol>	IF-EU∙550a.2	<ul> <li>(1) 21 minutes</li> <li>(2) 0.12 times</li> <li>(3) 175 minutes/service interruption</li> </ul>				

Activity Metric	Code	Performance
Number of (1) residential, (2) commercial, and (3) industrial customers	IF-EU·000.A	(1) March 2023: 2.91 million (Total residential) Total for (2) and (3) March 2023: 370,000 (Total electric power)
Total electricity delivered to: (1) residential, (2) commercial, (3) industrial, and (4) all other retail customers	IF-EU·000.B	<ul> <li>(1) 8.057 [GWh] (Total residential)</li> <li>(2) and (3) total: 15.318 [GWh] (Total electric power)</li> <li>(4) 557 [GWh]</li> <li>(5) 7,148 [GWh]</li> </ul>
Length of transmission and distribution lines	IF-EU·000.C	Length of power transmission and distributions lines as of the end of March 2023 [Transmission lines] Overhead: 12,504km, Underground: 745km [Distribution lines] Overhead: 66,660km, Underground: 1,724km
Total electricity generated, percentage by major energy source, percentage in regulated markets	IF-EU·000.D	Total electricity generated: 20,430GWh, of which hydroelectric power is 18.8%, thermal power 80.7%, nuclear power: none, and new energies: 0.5%. Japan has no regulated markets.
Amount of wholesale electricity purchased	IF-EU·000.E	13,732 [GWh]

Data downloads Annual securities reports

(1 million kWh)

# **Financial Information**

In addition, financial statements, sales performance, facility configurations, and other information is available on the HEPCO website under data downloads (https://www.hepco.co.jp/english/ir/datadownloads.html) and annual securities reports (https://www.hepco.co.jp/corporate/ir/ir\_lib/ir\_lib-06.html).



## 5 Years of Key Data (Consolidated)

	2019	2020	2021	2022	2023
Operating revenue (sales) (*1)	630,298	603,693	585,203	663,414	888,874
Electric utility operating revenue	597,701	567,895	547,329	625,497	835,974
Other business operating revenue	32,596	35,798	37,874	37,916	52,899
Operating expenses	588,080	561,278	531,428	638,443	911,405
Electric utility operating expenses	559,276	529,898	496,140	604,947	864,358
Other business operating expenses	28,803	31,379	35,288	33,496	47,046
Operating profit/loss	42,217	42,415	53,775	24,970	△ 22,530
Ordinary profit/loss	30,181	32,640	41,150	13,830	<b>△ 29,251</b>
Profit/loss before income taxes	24,849	33,437	41,411	12,194	△ 26,596
Total income taxes	2,014	6,316	5,071	4,864	<b>△ 4,783</b>
Profit/loss attributable to owners of parent	22,357	26,720	36,155	6,864	△ 22,193
Total asset	1,954,981	1,959,060	2,001,650	1,992,879	2,093,339
Total net asset	228,417	247,381	289,733	285,717	258,106
Capital investment	137,695	116,606	78,360	87,185	100,064
Interest-bearing debt	1,400,740	1,416,997	1,397,394	1,385,387	1,475,953
Profit/loss per share of capital stock (yen/share) (*2)	101.93	123.16	169.09	26.57	△ 114.96
Cash dividend per share (common stock) (JPY)	10	10	20	20	-
Cash dividend per share (Class-B preferred stock) (JPY)	3,000,000	3,000,000	3,000,000	3,000,000	-
Dividend payout ratio (%)	9.81	8.12	11.83	75.27	-
Shareholders' equity ratio (%)	11.09	11.99	13.84	13.68	11.69
ROA: Return on assets (%)	2.18	2.17	2.72	1.25	△ 1.10
ROE: Return on equity (%) (*3)	10.69	11.83	14.12	2.50	<b>△ 8.58</b>
Interest expenses	11,907	11,194	10,400	9,513	9,507
Depreciation	90,172	75,463	79,267	77,435	80,176
Cash flow from operating activities	113,808	102,686	136,547	102,337	△ 574
Cash flow from investing activities	△ 126,932	△ 126,745	△ 85,607	△ 77,720	△ 85,248
Cash flow from financing activities	△ 31,238	9,823	△ 24,662	△ 19,489	86,795
Cash and cash equivalents at end of period	71,725	57,490	83,767	88,894	89,867

\*1 Following application of the "Accounting Standard for Revenue Recognition" (Accounting Standards Board of Japan, No. 29, March 31, 2020), the Regulation on Accounting at Electric Utilities was revised. The amount of the impact from the Feed-in Tariffs (FIT) for renewable energy sources is no longer subject to revenue and expense reporting since FY2022. Key management indices and other metrics providing five years of primary data prior to FY2021 are regarded as management indices and other metrics providing five years of primary data prior to FY2021 are regarded as management indices and other metrics for which this revision has been applied retroactively to previous periods.

\*2 Profit (loss) per share of capital stock is calculated by subtracting the amount of preferred dividends attributed to the current term from profit attributable to parent company shareholders or loss attributable to parent company.

\*3 Shareholders' equity is calculated using the value arrived at by subtracting non-controlling shareholders' interest from net assets

	2019	2020	2021	2022	2023
Electricity sales	27,085	26,519	26,553	29,930	31,080
Low-voltage customers	11,673	11,169	10,815	10,345	9,962
High- and extra high-voltage customers	11,101	12,532	11,791	11,734	13,413
Other	-	-	77	86	557
Total retail electricity sales	22,774	23,701	22,683	22,165	23,932
Electricity sold to other companies	4,311	2,818	3,870	7,765	7,148
Supplied power	29,814	28,727	29,359	32,819	33,787
Hydroelectric	4,083	3,277	3,450	3,454	3,832
Thermal	19,082	18,020	18,007	19,554	16,487
Nuclear power	-	-	-	-	-
New energies, etc.	145	128	129	113	111
Electricity purchased externally (*4)	6,829	7,546	7,998	9,901	13,732
Pumping power at pumping power plants	ightarrow 325	riangle 244	ightarrow 225	ightarrow 203	<b>△ 375</b>
Nuclear power capacity factor (%)	-	-	-	-	-

#### Segment Information (Million yen) Sales 752,238 748,468 585,203 663,414 888,874 Hokkaido Electric Power 720,788 713,778 538,672 597,934 779,676 Hokkaido Electric Power Network \_ \_ 243,773 267,999 347,960 Other (\*5) 122.556 133.395 139.621 136.331 155.128 Adjustments (\*6) △ 338.851 △ **393.891** $\triangle 91.105$ △ 98.705 $\triangle$ 336.862 Segment profit (ordinary income) 42,217 42.415 41.150 13,830 △ 29.251 Hokkaido Electric Power 37,543 36.609 36.226 12.000 △ 34,471 Hokkaido Electric Power Network △ 3,352 1,197 △ 4,444 Other (\*5) 4,454 6,210 4,745 7,965 9,309 Adjustments (\*6) 220 $\triangle 404$ △ 1.019 △ 1,690 △ 737 Reference (fuel prices) Foreign exchange rate (JPY/USD) 111 109 106 112 135 Crude oil CIF price (BL) 72.2 67.8 43.4 77.2 102.7 Overseas coal CIF (USD/t) 120.6 101.1 79.8 160.9 358.9

\*4 The amount of power received from consolidated subsidiaries Hokkaido Power Engineering Co., Inc. and HOKUDEN ECO-ENERGY Co. Ltd. is included.

492.4

88.7

389.8

92.3

621.6

96.2

931.8

107.3

\*5 The category of "Other" is business segments not included in reportable segments, and includes other consolidated subsidiaries, etc.

\*6 "Adjustment" indicates the amount eliminated in transactions between segments on the consolidated financial statement.

545.0

112.6

\*7 The total may not match as figures have been rounded down or up.

LNG CIF (USD/t)

Water flow rate (%)

(Million yen)

# **Consolidated Balance Sheets**

Consolidated Balance Sheets		(Million yer
	2022	2023
Assets		
Non-current assets	1,763,847	1,761,374
Electric utility plants and equipment	1,163,594	1,147,235
Hydroelectric power production facilities	202,852	205,222
Thermal power production facilities	187,553	182,564
Nuclear power production facilities	148,664	135,707
Transmission facilities	179,494	177,122
Transformation facilities	105,698	105,107
Distribution facilities	292,648	297,060
General facilities	40,363	38,09
Other electric utility plants and equipment	6,318	6,354
Other non-current assets	57,530	59,76
Construction in progress	183,841	190,294
Construction in progress	166,238	169,148
Retirement in progress	146	198
Special account related to reprocessing of spent nuclear fuel	17,456	20,94
Nuclear fuel	235,193	208,05
Nuclear fuel in processing	235,193	208,05
Investments and other assets	123,685	156,02
Long-term investments	57,104	83,439
Retirement benefit asset	17,265	14,076
Deferred tax assets	40,840	47,572
Other	14,160	14,25
Allowance for doubtful accounts	△ 5,686	△ 3,317
Current assets	229,031	331,964
Cash and deposits	88,894	89,86
Notes & accounts receivable-trade and contract assets	71,449	91,46
Inventories	37,084	92,122
Other	32,317	60,29
Allowance for doubtful accounts	△714	△ 1,788
Total	1,992,879	2,093,339

		(Million yen)
	2022	2023
Liabilities and net assets		
Liabilities		
Non-current liabilities	1,378,184	1,421,993
Bonds payable	710,000	753,500
Long-term borrowings	512,453	510,648
Retirement benefit liability	37,040	35,929
Asset retirement obligations	108,388	112,599
Other	10,302	9,315
Current liabilities	327,329	411,047
Current portion of non-current liabilities	118,105	167,800
Short-term borrowings	44,500	44,500
Notes and accounts payable-trade	60,167	84,732
Accrued taxes	8,405	8,960
Other	96,151	105,054
Reserves under special laws	1,647	2,192
Reserve for water shortage	1,647	2,192
Total liabilities	1,707,161	1,835,233
Net assets		
Shareholders' equity	273,867	248,911
Share Capital	114,291	114,291
Capital surplus	47,348	47,348
Retained earnings	130,094	105,139
Treasury shares	△ 17,867	△ 17,868
Accumulated other comprehensive income	△ 1,219	△ 4,095
Valuation difference on available-for-sale securities	1,517	2,264
Deferred gains or losses on hedges	-	△ 1,831
Remeasurements of defined benefit plans	△ 2,736	△ 4,528
Non-controlling interests	13,069	13,291
Total net assets	285,717	258,106
Total	1,992,879	2,093,339

# **Consolidated Statements of Operations**

Consolidated Statements of Operations		(Million yen)
	2022	2023
Operating revenue	663,414	888,874
Electric utility operating revenue	625,497	835,974
Other business operating revenue	37,916	52,899
Operating expenses	638,443	911,405
Electric utility operating expenses	604,947	864,358
Other business operating expenses	33,496	47,046
Operating profit/loss	24,970	△ 22,530
Non-operating income	3,400	4,579
Dividend income	722	698
Interest income	20	64
Share of profit of entities accounted for using equity method	326	72
Reversal of allowance for doubtful accounts	1	490
Gain on sales of goods	722	749
Gain on derivatives	1	905
Other	1,605	1,599
Non-operating expenses	14,540	11,300
Interest expenses	9,513	9,507
Other	5,026	1,792
Total ordinary revenue	666,814	893,454
Total ordinary expenses	652,983	922,706
Ordinary profit/loss	13,830	△ 29,251
Provision or reversal of reserve for water shortage	116	545
Provision of reserve for water shortage	116	545
Extraordinary income	-	5,705
Gain on sale of nuclear fuel	-	5,705
Extraordinary loss	1,519	2,504
Impairment loss	-	2,504
Loss on return of imbalance income and expenditure	1,519	-
Profit/loss before income taxes	12,194	△ 26,596
Income taxes-current	3,083	816
Income taxes-deferred	1,780	△ 5,599
Total income taxes	4,864	△ 4,783
Profit/loss	7,330	△ 21,812
Profit attributable to non-controlling interests	465	380

# Consolidated Statements of Comprehensive Income

(Million yen)

	2022	2023
Profit/loss	7,330	△ 21,812
Other comprehensive income		
Valuation difference on available-for-sale securities	△ 791	760
Deferred gains or losses on hedges	-	△ 1,831
Remeasurements of defined benefit plans, net of tax	△ 3,399	△ 1,811
Total other comprehensive income	△ 4,191	△ 2,882
Comprehensive income	3,139	△ 24,695
Comprehensive income attributable to		
owners of parent	2,548	△ 25,069
non-controlling interests	591	374

# **Consolidated Statements of Cash Flows**

	2022	2023
Cash flow from operating activities		
Profit/loss before income taxes	12,194	△ 26,596
Depreciation	77,435	80,176
Decommissioning costs of nuclear power units	4,623	4,850
Impairment loss	-	2,504
Loss on retirement of non-current assets	5,568	2,663
Interest and dividends income	△ 743	△ 762
Interest expenses	9,513	9,507
Gain on sale of nuclear fuel	-	△ 5,705
Loss on return of imbalance income and expenditure	1,519	-
Decrease (increase) in notes & accounts receivable-trade and contract assets	1,656	riangle 21,531
Decrease (increase) in inventories	△ 6,071	△ 55,038
Increase (decrease) in notes and accounts payable-trade	11,486	24,942
Increase (decrease) in accrued consumption taxes	△ 9,737	△ 7,883
Other, net	10,769	2,312
Subtotal	118,215	9,441
Interest and dividend received	745	764
Interest paid	△ 9,690	<b>△ 9,350</b>
Income taxes paid	△ 6,932	△ 1,429
Net cash provided by (used in) operating activities	102,337	△ 574
Cash flow from investing activities		
Purchase of non-current assets	△ 77,787	△ 104,755
Proceeds from sale of nuclear fuel	-	19,443
Investments and loan advances	△ 2,686	△ 247
Proceeds from divestments and collection of loans receivable	409	528
Other, net	2,344	△ 216
Net cash provided by (used in) investing activities	△ 77,720	<b>△ 85,248</b>

		(Million yen)
	2022	2023
Cash flow from financing activities		
Proceeds from issuance of bonds	69,746	123,139
Redemption of bonds	△ 40,000	△ 50,000
Proceeds from long-term borrowings	45,400	85,500
Repayments of long-term borrowings	△ 82,064	△ 67,617
Proceeds from short-term borrowings	144,100	116,700
Repayments of short-term borrowings	△ 139,443	△ 117,517
Proceeds from issuance of commercial papers	85,000	164,000
Redemption of commercial papers	△ 95,000	△ 164,000
Dividends paid	△ 6,525	<b>△ 2,765</b>
Other, net	△ 703	△ 645
Net cash provided by (used in) financing activities	△ 19,489	86,795
Net increase (decrease) in cash and cash equivalents	5,127	972
Cash and cash equivalents at beginning of period	83,767	88,894
Cash and cash equivalents at end of period	88,894	89,867

(Million yen)

# **Corporate Information**

# Corporate Profile (Non-Consolidated Basis)

#### Overview (As of March 31, 2023)

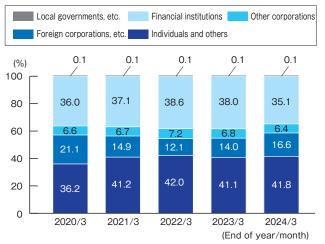
Corporate Name	Hokkaido Electric Power Co., Inc.	
Location [Head Office]	2, Higashi 1-chome, Odori, Chuo-ku, Sapporo, Hokkaido 060-8677, Japan Tel: (81) 11-251-1111	
Established	May 1, 1951	
Share Capital	¥114,291 million	
Total Assets	¥1,957,545 million	
<ul> <li>Electricity Retail</li> <li>Sales (FY2023)</li> </ul>	Low-voltage 9,962 GWh customers	
	High-voltage and extra high-voltage 13,413 GWh customers	
	Total 23,375 GWh	
Website URL	https://www.hepco.co.jp/english/	



### Share Information (As of March 31, 2023)

Number of Shareholders	Common stock	69,669
Shareholder 3	Class-B preferred stock	2
<ul> <li>Total Number of Authorized Shares</li> </ul>	495 million	
Total Number of Issued Shares	Common stock	215,291,912
	Class-B preferred stock	470
Independent Auditor	Ernst & Young ShinNihon L	LC
Stock Listings	•Tokyo Stock Exchange, Inc. (Prime Market) •Sapporo Securities Exchange	
Transfer Agent	Mizuho Trust & Banking Co., Ltd.	

### Distribution of Share Ownership



### Major Shareholders (As of March 31, 2023)

### (1) Common Stock

Shareholder	No. of shares held (1,000-share units)	Ownership ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	26,813	13.04
North Pacific Bank, Ltd.	10,215	4.97
Nippon Life Insurance Company	7,231	3.52
Custody Bank of Japan, Ltd. (Trust Account)	6,716	3.27
HEPCO Employees Shareholding Association	5,602	2.72
Mizuho Bank, Ltd.	4,226	2.06
The Hokkaido Bank, Ltd.	4,131	2.01
Isao Nasu	4,067	1.98
Meiji Yasuda Life Insurance Company	4,048	1.97
Custody Bank of Japan, Ltd. (Trust Account 4)	2,863	1.39
Note: Ownership ratio is calculated by subtracting 9,656,990 shares of tracsury stock		

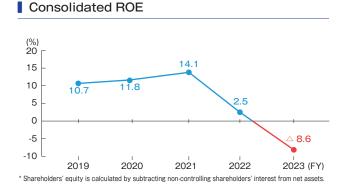
Note: Ownership ratio is calculated by subtracting 9,656,880 shares of treasury stock from the total number of shares outstanding.

### (2) Class-B Preferred Stock

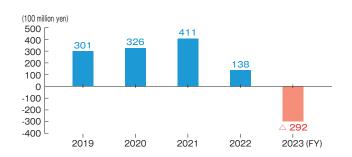
Shareholder	No. of shares held	Ownership ratio (%)
Development Bank of Japan Inc.	400	85.11
Mizuho Bank, Ltd.	70	14.89

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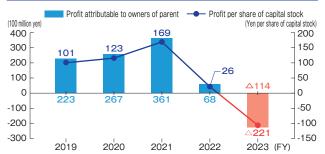
# **Financial & Non-Financial Highlights**



### Consolidated ordinary income

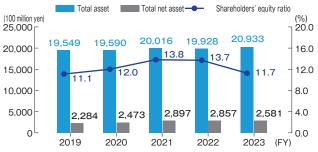


#### Profit attributable to parent company shareholders and profit per share of capital stock



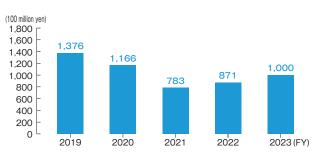
\* Profit per share of capital stock is calculated by subtracting the amount of preferred dividends attributed to the current term from profit attributed to parent company shareholders.

#### Total assets, total net assets and shareholders' equity ratio (Consolidated)

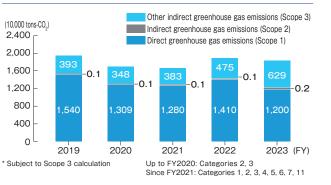


\* Shareholders' equity is calculated by subtracting non-controlling shareholders' interest from net assets.

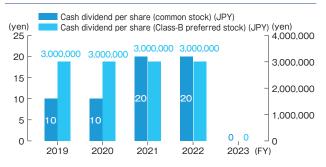
### Capital investment (Consolidated)



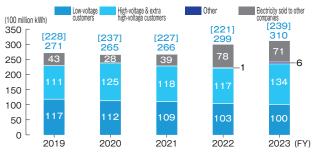
### Greenhouse Gas (GHG) Emissions



#### Cash dividend per share (common stock, Class-B preferred stock) (JPY)



### Total electricity sold



\* Figures in parentheses indicate retail electricity sales (repost)

#### Ratio of women managers



\* The nationwide figures for (companies with 5,000 or more employees) and (by industry) are calculated using the Basic Survey of Equality in Employment published by the Ministry of Health, Labour and Welfare.

